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MUNICIPALITIES

.....VS.....

Private Corporations

Political and Business Management

COMPARED

M. J. FRANCISCO

MUNICIPALITIES

VS.

Private Corporations.

Political and Business Management

COMPARED BY

M. J. FRANCISCO.

Tables Showing Cost of Lights Furnished by Private Companies and Municipal Plants, a List of Municipal Plants Sold or Abandoned, Experience of Municipalities, Legal and Editorial Opinions.

Published by M. J. FRANCISCO & SON,

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PREFACE.

The author commenced the investigation and study of municipal ownership in 1885. Twelve years' practical experience in electric lighting enables him to analize statements and reports of electric plants.

He sold his plant and withdrew from the business three years ago.

This, and all other books published by the author, have been at his own expense, without the knowledge, aid or money from any party or corporation; is not now, and never has been, the attorney for, or employed as such, by any corporation or electric light company.

While manager of the local electric light company, was elected president of the National Electric Light Association of the United States, which enabled him to secure valuable information regarding electric lighting, but is not now a member of that association.

The object of this book is to furnish reliable facts in relation to private and municipal plants.

The reports, regarding municipal plants given in this work, are made from city records signed by a responsible official.

In every case where positive and reliable information could not be procured, the report of that city has been omitted.

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EXTRACTS FROM AN ADDRESS DELIVERED BY M. J. FRANCISCO, BEFORE THE LEAGUE OF AMERICAN MUNICIPALITIES.

The functions of a municipality are to govern and regulate. It is a well-established axiom that to govern successfully requires that one shall be wholly disinterested, while ownership implies the greatest self interest.

Therefore, we have two propositions that are directly antagonistic. The experience of years has demonstrated that at the present time all business enterprises require rare ability and experience, if not genius, to succeed. Great financiers and successful men have devoted their lives to the study and practice of their trade or profession. How is it possible then for municipalities to expect such qualifications from officials whose term of office is for one or two years?

Permitting a municipality to engage in speculative ventures, or commercial industries, involves a most serious question, reversing the policy that has governed cities for hundreds of years, allowing them to assume all the hazards, risks and liabilities that attend the investment of money in business enterprises.

In doing this, the city abandons its governing power for which the municipality was created, and becomes a speculator and a competitor for gain, and if it is electric lighting, in case of a profit, those who use and pay for its production are taxed for the benefit of those who do not, while in the case of a loss all parties owning property are taxed for the benefit of users of electric light.

Judge Dillon says: "The legislature should be prohibited from allowing municipal corporations to engage in extra municipal projects, or to incur debts or levy taxes

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for such purposes. To clothe them with powers to accomplish purposes, which can better be left to private enterprise, is unwise. Their chief function should be to regulate and govern. To invest them with the powers of individuals or private corporations, for objects not pertaining to municipal rule, is to pervert the institution from its legitimate ends, and to require of it duties it is not adapted satisfactorily to execute."

If the municipality should assume these powers, they could absorb all business and manufacturing, sell all goods, and control every branch of trade. This would destroy competition, stop all development, and make the restless masses helpless and dependent upon the municipality; mere serfs, in fact.

Imagine, for a moment, the condition of the United States if all municipalities were to adopt this system, with the well-known working plan of American politics, based upon the familiar saying, "to the victor belongs the spoils," and these spoils available when either party is victorious. We should have all industries placed in charge of incompetent political tools, and, as Prof. Whitney says, "every new position placed at the disposal of the city officials tightens the grip of the ring boss upon the treasury of the city."

The management of these inexperienced politicians would be so unwieldly that there could be no accountability, no economy, and the city would become an instrument of oppression, which would eventually result in anarchy. It is fear of such an army of office-holders that causes conservative men to look with undisguised dread upon the paternal tendency of municipalities, for the trend is toward socialism, and they know that there is reason for caution.

We are told that competition is a failure. Then why not have regulation by law? It is and can be successful, and the experience of cities and states proves that this is the true remedy, and not municipal ownership. Massa-

chusetts has a commission to control and regulate business and prices charged, stipulate the amount of stock and bonds that may be issued, control all competition. If any taxpayer or municipality feels aggrieved by the acts of the private corporation or prices charged, they can at once apply to this commission for relief, which is seldom refused.

By this system of regulation and control, the interest of the public is protected, and at the same time the investment of private capital is encouraged and fostered.

It is claimed that municipalities have operated water works successfully. Then why not electric lights?

There is no analogy between the two. Nature furnishes the water free, and all that is necessary is to conduct it to the place where it is to be used. The apparatus required is simple and plain, not liable to accidents, has been in use for a generation, and will be used for a generation to come. There is no manufacture, it is simply the distribution of a natural product, while the outfit for an electric light plant and the manufacture of electricity requires the most intricate and complex machinery known to man, and is changing and being improved constantly. This delicate apparatus is subject to accidents of all kinds, and a heavy loss in transmission. One flash of lightning may wipe out thousands of dollars in value, or an accident similar to the one that occurred in the station where a crane was being moved, and the hook, slipping from the attendant's hand, struck a generator, and not only destroyed it, but the station, as well as the lives of several employes, involving a loss requiring an outlay of many thousand dollars; apparatus, where a careless movement of a plug upon the switch board would cause a short circuit, the effect of which no one, unless they have witnessed the action of a 3000-volt current under such conditions, can realize; a business requiring the most faithful men, who have by years of experience proved

their ability, and who therefore can command a salary commensurate with the responsibility they assume.

With such obstacles to contend with, how can we expect success in a city plant operated by inexperienced men, with constant jealousy and bickering between the managers, who are members of council made up from politicians of opposing political parties ?

Hon. Charles Waring said "that he favored the purchase of street railways in Great Britain, but that in the United States it would be utterly out of the question, on account of the attendant political evils."

The restless, tireless brain of the inventor may evolve apparatus in the next few years that will revolutionize the business, and the machines in use at the present time will become worthless, not because they are worn out, but by reason of the new invention which can produce the light at so much less expense that it would necessitate scrapping the present outfit and purchasing the new style.

Private companies have already had this experience in the past, and doubtless will suffer in the same way in the future. Why then is not a municipality liable to the same loss if it embarks in the business ? It is expected that a great revolution in the methods of generating electricity will be adopted in the near future, and the plan is being agitated of generating it directly from coal, thus avoiding the expense of steam and its attendant machinery. If this plan succeeds, the hundreds of thousands of dollars that municipalities have, and may invest in the present style of machines, will be relegated to the scrap pile.

Electrical invention is in its infancy. When it has attained its full growth, mankind will look back with wonder at the ignorance displayed by the people of the present generation.

The public have been deceived in reference to the cost of lights when furnished by the municipality. Mu-

nicipal accounts are so kept that in many cases it is impossible for the authorities themselves to ascertain the cost, and the persons in charge have a direct personal interest in making a favorable showing. The objection made by taxpayers, who oppose municipal ownership of business enterprises, is a strong inducement on the part of officials who favor it to make the apparent cost as small as possible.

Prof. Adams once said: "Facts regarding city financiering are simply appalling. It is not too much to say that every rule laid down by the science of financering has been disregarded by our cities." The political pressure for extension of the service, without reference to profitable returns, is irresistible. It is well understood and acknowledged that strict economy and the best business methods necessary for success are not considered under political management. It is useless to argue that politics will not creep into the business. History proves the contrary, and parties now announce that they favor the system as an inducement for votes. Ex-mayor Hewitt says: "However well disposed the officers of a city may be toward the proper performance of their duty, they are necessarily constrained and overruled by the exigencies of partisan interests, and compelled to reward political service by public office."

They tell us that the corruption and frauds of the present day have been caused by the acts of private corporations; that they buy and bribe city officials, and that municipal ownership will stop all of this demoralization and misrule under which cities are suffering.

If this condition exists, as they claim, and city officials can be bought or bribed by corporations, is it not certain that, when such men have the direct handling of the millions involved where the city own the plant, they would certainly supply themselves with funds at the city's expense? If the man was dishonest in the first case, would he not be equally so in the latter? If we were to

believe their statements, we must concede that all the scoundrels in this country belong to corporations, and that no others are admitted to such companies, and that none of this class were ever found among politicians or ring bosses. There must be two parties to bribery. The representative of the corporation, no matter how venal, would never approach an official for this purpose, unless he had been given a plain intimation that the official was willing to participate in such a deal. From the socialist standpoint, there is nothing dishonorable in the official accepting the bribe, but the party representing the corporation who offers it is the greatest scoundrel in existence. Are not both equally guilty?

The records and evidence disclosed in New York and other cities shows plainly that many seek such offices with the expectation of such offers, and are figuring for what "there is in it."

As Andrew D. White once remarked : "With a few exceptions, the city governments in the United States are the worse in christendom, the most expensive and the most corrupt."

The remedy for all these evils complained of is simple. Elect men of integrity and responsibility to these offices, who can and will protect its citizens against not only the corporations, but the bosses and political thieves as well. Until this is done, all the plans and theories of municipal ownership on the face of the earth will not convert a dishonest politician and cause him to renounce his hunger and greed for the emoluments and pickings to be obtained while occupying some official position.

Harper's Weekly, referring to the politicians and ring bosses of Philadelphia, says: "They are reported to be in affluent circumstances, or on the high road to wealth, although in many instances the salaries attached to their positions are small, as in the case of the magistrate, or nothing at all as in the case of the councilman. How then do these men make their money? Are they shrewd

business men and engaged in outside enterprises not purely political or dependent upon the action of political bodies for existence or favors? But two out of the thirty-seven ward leaders are men of means acquired before they went actively into politics. The question therefore logically arises, did they make their money through politics, and if so, by what means?"

There are plenty of instances where capable and upright men have held office, and while this has been done, you do not hear of any concessions made to corporations that were injurious or prejudicial to the interest of its citizens. If such men are elected they will command the confidence and respect of the world, and will perform their duties fearlessly, and inaugurate a system of order and business that will remedy the chaos now existing in many cities; besides, by this course, you will destroy the feeling that there is a moral taint attaching to any reputable man who enters a contest for office.

Referring again to Judge Dillon, the highest authority on municipal law, says: "Our large cities are encountering the perils of corruption and fraud on a gigantic scale, engendered by the large revenues and official patronage at their disposal, and the disinclination, often the steady refusal, of the substantial citizens, to take a controlling part in the management of municipal affairs."

The whole foundation of municipal ownership is based upon the assumption that inexperienced hired employes of a city, who have not a dollar at risk and in many cases have been given the position as a reward for helping some political aspirant to office, can and will run the plant and manage the business more successfully than members of a private corporation, notwithstanding the latter may have nearly all their property invested in the enterprise, and a failure means ruin for them. Is it not reasonable to suppose that men under such conditions will give closer attention to business, and guard and investi-

gate every branch and detail of its work? It is a well-settled axiom that the more a man has at risk, the closer attention he gives to its details and economy.

As ex-mayor Fitler says: "A little mismanagement here, a little extravagance there, would change the dividends of the private companies to municipal deficits, and when they advocate municipal operation of street railway lines they advocate an experiment, the effect of which they know absolutely nothing about and have no possible means of calculating."

Hon. Charles O'Connor said that "by means of general laws admitting no favoritism or partiality, all requisite facilities through corporate forms should be afforded individuals for conducting every description of lawful business, so as to prevent any needless action by the municipality, or the employment of its officers in any affairs that could be committed to individuals as a business."

The statement of the city clerk of Tacoma shows that when the city furnished their own power it cost them two and sixty-four one-hundredth cents per kilowatt, and now they buy it of a private corporation for one and sixty-two hundredths of a cent per kilowatt, demonstrating that because of the care and close attention given to the business by the private company they can afford to furnish the current at a less price than it costs the city to produce it in their own plant.

Every one knows just how an election is managed in American cities. As soon as a man is elected he must pay his followers for their support by distributing the offices at his command, and as he has been elected by the political leaders' management, he must acquiesce in their demands, no matter what the result may be upon the affairs of the city. This has been the rule of the government as well as municipalities, and an official in the post-office department once said: "The blind policy of substituting inexperienced for experienced men comes at every elec-

tion; whole lines are stripped of their experienced men and the creatures of politicians are put in their places."

The majority of voters in all cities are practically non-taxpayers, that is, they pay only a poll tax, and, therefore, it is immaterial to them what the expenses are, provided they can secure the favor of the ward boss, and this party seeks every opportunity of impressing upon them his ability as a political fighter. The *North American Review* truly says: "The constant element in municipal affairs is the unremitting desire of the politician to gather masses of votes, and of the contractors to place men, who furnish them, to prey upon the city treasury. The people who do not pay are always ready to create debts against the people who must pay."

Prof. Bryce said: "That the Philadelphia gas ring controlled at least 20,000 votes, and the number of men employed in a gas plant is very small when compared with the number employed in other lighting works."

We are told that where city owns the plant they can produce the lights for half the amount it costs private companies, but it has never been proven, and can not be. Assertions are not evidence, while it is a fact that the cost of municipal work is notoriously greater. We have an example of the economy of public work in the capital at Albany.

John Stewart Mills well says: "The mischief begins when, instead of calling forth the activity and powers of individuals, it substantiates its own activity for theirs."

It is well known that municipal ownership is purely and simply a political move to secure votes for some aspirant for office, and that it is used for this purpose, regardless of any other question. Parties have publicly announced that they are using it as a plank upon which to stand while they gather in the votes. It has become a well-established principle with both political parties that city government is the legitimate spoils of the victorious party. It is for the purpose of catching the votes of the

laboring class that lower rates of taxation, with shorter hours and higher wages, are promised, but these are forgotten as soon as the election has passed, as was shown in Detroit and other places.

In Alameda, Cal., it was carried so far that men were forced to work in the municipal plant fourteen hours at a run, and the engineers have fainted at their post as a result of such overwork. The *Alameda Argus* says: "The light it sells is sold at a loss. As a business venture Alameda's experiment is a rank and wretched failure. As a pet scheme of the municipal ownership faddist it will flourish as long as the people submit to the high taxes which it imposes."

When the advocates of municipal ownership find themselves unable to disprove the facts disclosed under municipal management in this country, they immediately fall back upon Glasgow and the wonders achieved there by municipal ownership. The conditions are not the same in Glasgow as are found in the United States. The government is entirely different, and the political situation that exists in this country is not found there. Wages there are less than half those paid in this country. Conductors on street cars are paid 93 cents per day the first year, and $1.04 the third year, while conductors on street cars in New York are paid $2.00 the first year and $2.25 after that. The average wages for the railroad men in Glasgow are 78 cents per day, while in New York it is $1.88. Here we have a difference of more than 100 per cent in wages alone.

Any one who has traveled over the street railroads in Glasgow knows perfectly well that the whole equipment and accommodations are antiquated and behind the age, while the service furnished there would not be tolerated in any city in the United States. We are also told that the profits or revenue from the street railway in Glasgow is so large that it pays all the expenses of the government, while, in fact, the roads are not operated for the purpose

of producing a revenue to meet current expenses of the municipality. Instead of there being no taxes in Glasgow, they are more burdensome than in this country. Rents are taxed 12½ cents on every dollar that a man pays, and the owner of the property has to pay the same amount of tax; besides this license taxes are levied. You pay a tax for every servant you employ in the house, also on every horse or carriage; in fact, you cannot turn round without running against a tax collector. Mr. Robert Crawford of Glasgow, a strong advocate of the system in that city, says: "Before I came to this country I saw no reason why American cities should not adopt municipal ownership, and wondered why they had not done so. But now that I have obtained an insight into the conditions that prevail in your cities I have entirely changed my views. As things are now in your cities, municipal ownership is an impossibility. Success in that great undertaking is out of the question so long as party politics figure in municipal elections, and so long as city offices are used to reward political work. With the conditions that exist in American cities to-day, municipal ownership is utterly impracticable. It can never be a success until the system of political rewards is entirely divorced from city government."

This is the testimony of a citizen of Glasgow after he had visited the United States and studied our political management.

The financiering plans of socialists and economists, as given in a book lately published, is certainly original. They say: "The bonded debt incurred by a private company is looked upon as an investment, and not a burden—it is never to be paid off, while, on the other hand, in a public industry a debt is a burden to be liquidated as soon as possible." That is, if a private company issues bonds, it is so much clear gain, they will never have to be paid; but if the city issues them they are a debt, and must be paid. Perhaps some of our learned friends will tell us how a mortgage, given by a private company, is an asset, while the same mortgage, if given by the city, is a

liability? Yet such arguments are advanced in the support of municipal ownership.

If the advocates of municipal ownership desired to give a fair comparison between private and public ownership and furnish taxpayers facts, they would compare the cost by the two systems as shown at the present time. Instead of this they quote prices charged by private companies ten years ago, when everything cost more than three times what it does now, and then compare the cost of the municipal plant at the present day. In 1888, when the private companies were furnishing the lights, the dynamo used cost $43.20 per arc, while the lamps cost $50.00; now the dynamo would only cost $19 per arc, and the lamps $22.50. Carbons cost then from $40 to $50 per thousand, now they can be bought for $10.

Why is it that advocates of municipal ownership constantly decry private corporations? Is it for political effect, or to cover some of their own schemes?

If we could roll back the wheels of time for one hundred years, we should find people trucking their grain to market with ox teams, travelers wending their way through the country upon horses and in the old lumbering stage coach or the prairie schooner, dragging its slow way across the continent; letters and papers delivered from five days to nine months after they were written or printed; transactions in London not reported in New York until weeks and months after they occurred, while any communication with California was almost impossible.

In place of this crude and expensive system, the business man of to-day can breakfast in New York and dine in Buffalo, or he can leave the Atlantic coast on Monday, climb the Rocky Mountains, covering 4,000 miles of space, and bask in the genial air of the Pacific coast on Friday; sit at his breakfast table and read the accounts of what was done the evening before in England, Russia, China, South Africa, and, in fact, news from every civilized country in the world; stand at his counter in New York or Boston

and talk with his agent in Chicago; flash a message around the world and receive an answer in twenty minutes.

All of these wonders are the creation of private corporations. It is these corporations that have made America what she is, the grandest and most powerful nation upon the face of the globe.

DEPRECIATION.

"Depreciation should not only account for the actual deterioration of the apparatus due to its use, but should include the reduction in the market price of apparatus, and the loss upon apparatus which becomes commercially useless through the progress of the art, as well as those appliances which may become valueless, not because they are worn out or out of date, but because the growth of the business in that particular locality makes it no longer economical to use them, and although in condition to do the work for which they were orginally designed, nevertheless become practically useless through the necessity for a reconstruction or rearrangement of the works to meet new conditions."

Experience is the best teacher and will demonstrate fully the length of time apparatus will run successfully. When the apparatus becomes worn, and is old and antiquated, no company can afford to use it on account of the heavy per cent of loss in producing the lights. For this reason, little or nothing can be obtained, for the old machinery and the value of the plant when renewed would be no greater than when first erected.

Wabash, Ind., used dynomos and lamps, costing $1,800 for six years, and then sold them for old junk.

Alameda, Cal., sold apparatus costing $20,000, after seven years' use, for $350.

Xenia, Ohio, sold apparatus costing $35,000 for $10,000, after using it eight years.

Marcaline, Mo., sold apparatus costing $1,600 for $800, and only used it nine years.

Michigan City bought apparatus and paid $10,000, used it six years, and sold it for $2,500.

Moline paid $15,000 for apparatus, used it eight years, and sold it for $8,000.

Gravesend, L. I., paid $120,000 for apparatus, kept it two years, and sold it for $30,000.

Bloomfield, Iowa, purchased dynamos in 1891 and in 1896; they failed and had to be replaced with new ones, at an expense of $5,000.

Hull, Mass. voted to borrow $2,000 to pay for repairs caused by an accident during the year.

Marquette, Mich., paid $15,000 for replacing apparatus in one year.

Northfield, Vt., had to spend $8,700 to replace machinery after using it two years.

Topeka, Kan., sold apparatus costing $20,000 for $1,500.

Bay City, Mich., had to replace their engine after six years' use.

The experts employed by the mayor of Springfield, Ill., made the depreciation 10 per cent per year.

The committee appointed by congress made it 10 per cent.

The mayor of Decatur, Ill., said after several years' experience with a municipal plant, that if 10 per cent was allowed for repairs, and then 10 per cent added for depreciation, it would not be too much.

The mayor of Rock Falls, Ill., says: It will be noticed that I have figured a 10 per cent depreciation of plant. This is by no means a high estimate for property of this class, and is one that it is absolutely necessary to take into consideration. It is a plain business proposition, that any institution to be a safe, not to say profitable investment, must be capable of maintaining itself against depreciation, that the property may at any time be worth to its owner its original cost. There would be no surer way for the city to lose money than to run the electric light plant at a rate of income that only paid operating expenses. In the end, the plant must become worthless

through lack of maintenance, and the original investment would certainly be lost."

The superintendent of the municipal plant at Sharpsburg, Pa., says they paid $20,000 for the plant, but can duplicate it complete for $10,000.

The engineer who constructed the Ypsilanti, Mich., plant says that 10 per cent depreciation is very low.

The manager of the municipal plant at Marietta, Ohio, says cannot be made less than 10 per cent.

The experts at the Philadelphia investigation made it 10 per cent.

The best expert in England states that 10 per cent is as low as it can be calculated.

Oxford, Ohio, paid $25,000 for a plant, and can now duplicate it for $12,000.

Marshalltown, Iowa, paid $4,000 for two dynamos, and abandoned them after 10 years use, and can not sell them for more than $600.

Detroit started plant in 1895, and in 1899 the lighting commission asked for $38,000 to replace some of their dynamos with new ones.

A private company sold a dynamo, costing $1,900, for $260, after six years use.

Taunton, Mass., installed a municipal plant in 1897. In March, 1898, the mayor sent a communication to the city council, notifying them of the breaking down of the engine in the municipal plant, and recommended that $5,000 be appropriated to purchase a new engine and prepare a foundation for same.

Logansport, Ind., had to expend $12,000 in replacing their engines and boilers, installed four years before.

Mayor Quincy of Boston, when he made the ten-year contract with the private company to furnish the lights, inserted in the contract the following agreement: "The company are allowed to charge off, as against the city, such depreciation as it actually provides for, but not exceeding seven per cent per annum on its total investment,

exclusive of land. This limit was fixed after careful consideration, and in the opinion of the city engineer it represents no more than a proper allowance for this purpose. The principle of providing for the depreciation of a plant which deterioates, or becomes obsolete as rapidly as an electric light plant does, is the only proper one, and it seemed to me that sound public policy required the city to provide for a sufficient allowance for depreciation, rather than ignore this necessary element of cost, as is too often done."

The city clerk's books of Little Rock show that they spent between 1888 and 1892 $39,704.80 constructing the electric plant.

In 1894 they appropriated $30,000 more, making a total of $69,622.

In the city clerk's report for 1895 he states that the total value of the plant at that time was $35,000.

Here is a shrinkage of about 50 per cent in less than seven years. If there is only three per cent depreciation on electrical apparatus, as claimed by advocates of municipal ownership, why is it that a plant costing $69,622 at the end of seven years is only worth $35,000, and at the end of ten years, in 1899, it is necessary to spend $50,000 more to put the plant in proper shape to do their business?

Halletsville, Texas, had to abandon their old plant and construct a new one, the old one being out of date.

Toledo, Ohio, invested $2,000,000 in a municipal plant, and after ten years the highest bid they could get for it was $300,000, making a loss of $1,700,000.

Swanton, Vt., a pulley burst and destroyed instantly a dynamo that cost $3,000 to replace, and it only had been used a short time.

Ex-mayor Matthews of Boston, whose ability and integrity is beyond question, after an examination of the municipal plant at Detroit, says: "We must make full allowance for the depreciation in the plant due to wear

and tear, to the progress of invention, and to the occasional necessity for enlargement and reconstruction.

"I estimate a proper allowance for depreciation on this plant as follows: Buildings, machine shop, scales, etc., four per cent; steam plant, seven per cent; electric plant and overhead system, ten per cent; conduits and cables, five per cent.

"These allowances average about seven and one-half per cent on the first cost of the plant, exclusive of the land.

"Depreciation is the main reason why portions of an electric light plant must, from time to time, be discarded and sold for old material, but is not, however, due to the actual use and wear of the machinery, but to the fact that the progress of electrical invention is so rapid that from time to time entirely new machinery is put upon the market, so superior in economy of operation that the electric light companies cannot afford to keep the old machinery, and to the further fact that no electric light plant is laid out at the outset of sufficient dimensions to accommodate the growth of business indefinitely, and accordingly there arises a periodic necessity for reconstruction and enlargement, which incidentally involves the destruction or abandonment of a part, often a considerable part, of the existing buildings and machinery. These considerations are, of course, well known to everybody interested in electric lighting.

"Some persons, also, while admitting that the depreciation in electric light plants, due to these causes, has been fully six or seven per cent during the ten years just past, contend that no such rate of depreciation is to be expected in the future; but to this it may be replied that the experience of the recent past is the only safe guide to the probabilites of the future, and that the manufacturers of electric lighting apparatus are no more confident that the limit of invention has been reached in this branch of industry now than they were ten years ago."

William Jackson, city engineer of Boston, says that a fund or account should be created to cover depreciation, renewals, etc. (as distinguished from repairs), and that the payments to this fund should amount annually to two per cent of the cost of the buildings, five per cent of the cost of boilers, etc., and ten per cent of the cost of engines, generators and other electrical apparatus, including all outside construction. These percentages will be found, when added together, to amount to from seven to seven and one-half per cent of the first cost of the entire plant, or sufficient, if invested in a sinking fund, to equal, with the annual increment thereon, the first cost of the plant in about ten years.

An advocate of municipal ownership, who claims nothing should be allowed for depreciation, says: "Supposing there is a depreciation in the municipal plant, suppose the whole plant, costing half a million, is lost, all that is necessary to do is to levy a tax and replace it; if it is squandered, there is plenty more that can be procured by taxing the property of the citizens."

The following extracts from the report of the lighting commission of Detroit, published in the *Detroit Journal*, shows the condition of the plant under their plan of three per cent depreciation:

"The public lighting plant has been allowed wofully to deteriorate. The entire power plant will have to be overhauled. The lamps have not been renovated for two years and are causing great trouble. The roofs of the power house are leaky and defective. The line poles are rolling away. There is no reserve power in the plant and more power must be added. The machinery and lines have not been properly maintained and will have to be overhauled and repaired. The dock back of the works is rotting away."

Here is the history as given by their own commission of what is claimed to be the most successful municipal plant in the United States.

MUNICIPAL PLANTS SOLD OR ABANDONED.

ABERDEEN, Miss., owned the electric plant. It proved a failure, and they sold it to a private company and made a contract with them for the lights.

The following correspondence explains itself:

DEAR SIR:—

Replying to your favor, I desire to say we have a contract with the city. They owned a plant and run their own lights, but it cost them $700 a year more than it does now under our contract. We bought their machinery, etc.

Yours truly.

AUDUBON, Iowa, tried municipal ownership and failed, then leased the plant to private parties and made contract with them for lights, and the lights are now furnished by the lessee.

PORTSMOUTH, Ohio, operated the municipal plant for seven years, but could not make it profitable, and rented it to a private company and made a contract with them for lights.

WYTHEVILLE, Va., invested $10,000 in an electric plant. It proved a failure, and they turned it over to a private company and made a contract for lights.

WABASH, Ind.—DEAR SIR:—Our city put in an arc lighting plant about 1878, and ran it for nine years. After that the city made a contract with the Electric Light Co., and this has been continued ever since.

The old municipal plant was sold for junk. It cost $18,000.

Yours respectfully.

It is claimed that three per cent will cover all depreciation, but this city, after using the aparatus for only nine years, sold it for junk.

MOLINE, Ill.—DEAR SIR:—We bought the Moline City plant because we could furnish them lights cheaper than they could run them from their water works. The plant cost them $15,000 and we paid them $8,000 for it. It cost them to run their lights for the four years they operated the plant a little over $93.00 per light. We have contracted with them for $84.00 per light, 2,000 candle power, run whenever it is dark and they dock us if lights are out.

Yours truly,

PEOPLE'S POWER CO.

MARCALINE, Mo.—DEAR SIR:—The city ran the plant a few years and gave it up as a bad job, finding it very expensive. After lying idle some time, it was sold to the private company now running it for about $800, which was paid in service. The property was never worth anything like the price paid for it by the city.

Yours truly.

The plant cost $16,000 and they sold it for $800, taking their pay in service.

BERKLEY, Cal., not being able to operate the plant successfully, after spending a large amount of money, turned it over to a private company, who have operated the lights on contract since that time.

TACOMA, Wash.—DEAR SIR:—The city clerk writes saying the Railway Company furnish the city power more cheaply than the city could furnish its own. It cost the city 2.64 cents per kilowat and we buy it at 1.62½ cents, and we have made a five years' contract with a private company. Previous to making this contract with the private company, and while the city operated their own power plant, they lost $19,000 per year.

CARROLTON, Ga.—DEAR SIR:—The plant was sold to me because the town could not run it satisfactorily, and for the purpose of getting better lights for city and commercial lighting. They pay me $20.00 each per year for incandescent lights.

Yours truly,
C. R. TURNER.

HOPE, Ark.—DEAR SIR:—Myself and associates have purchased the Hope water and light plant. The city sold it because they needed a larger plant and they had no money for improvements.

Yours respectfully.

This town has sold its water works and electric light plants and granted a twenty-five years' franchise.

Yours truly,
S. A. KINGTON,
Recorder, Town of Hope.

MICHIGAN CITY, Ind.—DEAR SIR:—In reply to your inquiry will say we have sold our lighting plant for $2,500, and have contracted with a private company for ten years.

Respectfully yours,
M. T. KRIDGER, Mayor.

The plant cost $10,000 and they sold it for $2,500.

STOCKTON, Kas.—DEAR SIR:—Replying to yours will say that this city has abandoned its plant.

The reason we abandoned the scheme was that it did not pay expenses.

Respectfully yours.

PORTLAND, Ore.—DEAR SIR:—The municipal plant was sold to the Electric Light Co. We are now paying about two prices for lights.

Yours truly.

Here is a case where the taxpayers were willing to pay two prices for lights to a private company rather than operate their municipal plant any longer.

HUDSON COUNTY, N. J., invested about $100,000 in a municipal plant. It was not a success. Numerous complaints regarding the inefficiency of the county employes in charge of the plant, and of frequent breaking down of the machinery, have been made.

The failure of the plant to do the work expected disgusted all parties and they voted to abandon it, and have contracted with a private company for the lights.

The *N. Y. Advertiser* says we commend the freeholders for deciding to abandon the job of lighting the Boulevard, and if this decision had been reached three years earlier it would have saved the county $65,000. The freeholders should have kept politics and political heelers away from the lighting plant.

PHILADELPHIA GAS WORKS, a failure, millions involved. The municipal gas plant that advocates of municipal ownership have cited time and again as an illustration of the benefit to be derived where a city owned the plant, has been proven an utter failure and been leased to a private company for thirty years.

The strongest argument against municipal ownership of the century. After a practical experience of over thirty years and a loss of millions of dollars the system has been abandoned. Advocates of municipal ownership have proclaimed before every committee and in every paper published favoring the system that they were making money. When the truth is known and the secrets of the huge political machine is exposed, it discloses the most stupendous fraud, mismanagement and deceptive bookkeeping ever conceived.

XENIA, Ohio.—DEAR SIR:—I purchased the municipal plant of this city for $10,000; it cost $35,000.

Yours truly.

TIPTON, Iowa.—DEAR SIR:—Replying to your favor I have to say that our water works and electric light plant were destroyed by fire. The destruction was practically complete, about the only thing saved being our artesan well. The loss was surely $2,500, and I believe much more.

Yours respectfully.

T. B. MANLEY, Mayor.

After this the city gave a franchise to a private company and made a contract for the lights.

GRAVESEND, L. I., furnishes the most glaring incident of the waste of municipal funds. They sold a lot of the town common lands and put the proceeds into a municipal electric light plant, costing $120,000. In 1897, an offer was made of $2,500 for its poles, and another offer of $15,000 for the whole plant. Since then the plant has been sold to the Edison Company of Brooklyn for $31,000. Part of this will be eaten up by other charges, and is all the town has to show for lands which were sold at a price far below their real value in order to install this municipal plant.

LE ROY, N. Y., was using lights furnished by a private company. Advocates of municipal ownership represented to the tax payers that if the municipality owned the plant a great saving could be effected. At that time the Hydraulic Co. offered to light the streets for $2,000 per year for a term of five years. The taxpayers were induced to adopt the plan of municipal ownership. Now the report made to the tax payers by the officials calls for $4,938 to run the plant with the same number of lights as offered by the private company. They were also induced to invest $20,000 in the gas plant because it would be a profitable investment. Now the report shows receipts to be $1,500 and they have got to spend $1,440 for coal, leaving them $60 with which to pay the interest upon $20,000 and pay the wages of all the help needed to run the plant and make necessary repairs. They compelled the private company to sell the plant to them. It turns out that the ballot authorizing the municipal plant was illegal and Justice White of Buffalo decides that they cannot hold same. With their present knowledge of the business and their experience, the decision is looked upon as a fortunate deliverance from a financial burden, and the people are congratulating themselves over their escape.

FINDLAY, Ohio, tried municipal ownership with a gas plant, could not succeed and have sold it to a private company.

DEAR SIR:

This company has purchased the municipal gas plant from the city. It was turned over to our company March 29th, 1899. This company is now furnishing gas to the city under a contract.

We are truly yours,

J. M. BARR, President.

MADISON, Ind.—DEAR SIR: We bought the municipal plant of this city and are furnishing the lights under contract.

Yours truly.

CHEHALIS, Wash., invested $26,000 in an electric plant, and and being unable to manage it successfully, leased it to a private party and made a contract with them to furnish the street lights.

DAYTON, Tenn. Plant is closed and for sale. Citizens say plant can be bought cheap.

COLUMBUS, Ohio.—Director Kauffman of the water works department, Columbus, Ohio, has announced that in his opinion the municipal electric lighting plant, operated in connection with the water works, is one of the expensive features of his department, and should be abandoned. The annual report of the director will show that the cost of operating the municipal plant per lamp more than doubles the cost of the contract lamps at the present time. The city council has ordered an investigation.

COLUMBUS, Ohio.—The electric light fund of this city has become exhausted, and Director Kauffman has announced that the municipal lighting plant which furnishes current for 350 lights on the north side of the city will be abandoned. The companies furnishing contract lamps have been notified to re-distribute their lamps in order to cover the territory in the best manner possible.

BRAINERD, Minn.—DEAR SIR: I enclose report made by a committee of the city council:

We respectfully recommend that the question of the sale of the plant be submitted to a vote of the electors of this city. The proposition meets with our approval and our reasons are as follows: First—If the plant is not sold, the city must, in a short time, expend large sums of money to make it serviceable. Second—The ownership of the plant by the city has not proven profitable to the city, and without criticising anybody, we must say the service has been poor and not satisfactory. Third—We may be reasonably certain that we shall get better service if the plant is sold.

The tax payers confirmed this action by an overwhelming majority and the plant was sold ; the purchaser failed to pay for it and it was thrown back upon the city.

BOSTON, Mass.' experience with municipal ownership: Those who believe in municipal and government ownership and control of most productive agencies may find some pertinent facts in the report just made by Mr. William Brophy, chief electrician of the Boston wire department, to Mayor Hart, on the electrical construction division of the public buildings department. Several years ago, Mayor Quincy inaugurated the electrical construction division along with the city printing plant, to protect the city treasury from the extortions of private dealers and contractors. So well has the plan succeeded in the electrical construction division that the city has paid from two to three times as much for a large amount of work as private contractors wished to charge, and the division is now to be closed out as soon as possible. The great difference between the cost of work done by the city force and the face of the tenders for the same by private concerns seems to have been largely due to the class of labor employed. This point is put with no lack of clearness in Mr. Brophy's own words. He says: "A glance at the payrolls shows that nearly 60 per cent of the men whose names they contain

were appointed at the request of certain prominent gentlemen, who, to say the least, are not the best judges of the necessary qualifications of the employes of this department. Electrical contractors employ only a sufficient number of men to meet the requirements of their business. Not so with the head of this department, for when, in his judgment, the force should be reduced, owing to lack of business, he meets with a most decided opposition from the friends of the men whose services sound business principles prompt him to dispense with. In nine cases out of ten the men solected for dismissal, because their services are not required, owe their appointment to some active politician, high in the councils of his party, who sees to it that his friends are reinstated, regardless of the city's interest of the condition of its treasury. As a result of this unwarrantable interference, men are kept on the pay-roll whose services are not needed, and others who never should have been employed. Discipline, which is so necessary for the success of any establishment, cannot be maintained in this department so long as a large percentage of its employes can retain their position, not through any effort of their own, but owing to party exigencies." It is charged in the report that unnecessary work has been undertaken by the electrical construction division in order to keep a large number of men employed. One instance, where it was sought to undertake a very large and entirely unnecessary piece of work, is said to be that of the new court house, where the wiring was reported to endanger the building, and a request was sent to the judges to have it rewired by the electrical construction division. On examination by Mr. Brophy, the wiring at the court house was found in satisfactory condition.

The report goes on to give items of equipment and cost for a large number of plants installed by the electrical construction division. Three of the East Boston ferryboats have been equipped with electric light plants at a total cost of $10,200 by the electric construction division. A bid for the complete electrical equipment on these three boats and one other was received from the General Electric Company, the price being $6,800. Per lamp installed the General Electric price was $23.61, while the cost to the city through the electric construction division was $47.22 per lamp. On another boat the Westinghouse Company bid the sum of $3,900 for a complete plant, and the electrical construction division did the job at a cost of $5,800 to the city. Figures for land work done by the division seem about as high in proportion as do those upon the water. The Ann White Vose Building at the city hospital was wired at a total cost of $4,754.56, or $12.96 per outlet, the estimated cost being $4.50 per outlet. The English High School was wired for a total cost of $3,797.40, or $5.55 per lamp, the estimated fair cost being $2.25 per lamp. In the Irvington Street Armory 943 incandescent and 24 arc lamps were installed at a cost of $6,683.47, the fair estimated cost being $2,571.75, or 38 per cent of the actual sum paid out. All of the plants cited in the report of Mr. Brophy shows about the above proportions between actual and fair estimated cost.

On all of the work reported the labor item shows much more than

its usual per cent of the total cost for complete equipments. The percentage of labor to the total cost varies from 47 to 62 per cent, being in most instances nearer the higher figure. In closing, Mr. Brophy says: "I think it best for you to discontinue the electrical construction division, that has proved a rest for the weary, a spawning bed for embryo statesman, and has accomplished so little of the real work for which it was organized, viz., guarding the city treasury against the rapacity of electrical contractors and dealers."

AFTON, Iowa, invested $6,500 in an electric light plant, but could not succeed and leased it to a private party and made contract for lights.

ONTONAGON, Mich.—DEAR SIR:—We have not operated plant since 1896; part of the town and all of our lines were destroyed at that time.

T. MOSS.

The following report comes from

HERRINGTON, Kan.—The council has determined to close down the city electric light plant owing to the excess of expenses over receipts. The deficiency up to the end of last year was $5,200, and for some time it has been running behind at the rate of $200 a month.

ARC AND INCANDESCENT LIGHTS FURNISHED BY PRIVATE COMPANIES AND MUNICIPAL PLANTS.

So many wild claims have been made by the advocates of municipal ownership regarding the number of lights that municipalities were furnishing, that we give the following table, taken from the latest reports, showing the arc and incandescent lights furnished by private companies and municipal plants in all the states.

This proves that all of the municipal plants in the United States are only producing 8,905 arc lights, as compared with 264,124 furnished by private companies. That only 522,257 incandescent lights are furnished by municipal plants, while private companies are producing 8,588,194.

The state of New York has only 1,223 arc and 11,900 incandescent lights produced in municipal plants, while private companies in that state furnish 46,233 arc and 1,440,133 incandescents, being 37,328 more arc lights and 917,786 incandescents in that state alone than are produced by all the municipal plants in the United States.

Connecticut has only 185 arc and 5,500 incandescent owned by municipalities, while private companies furnish 5,281 arc and 134,538 incandescents.

Massachusetts has 2,027 arc and 33,500 incandescents furnished by municipal plants, and there are 20,317 arc and 732,515 incandescents from private plants.

The same comparison applies to all the states.

In some states not a single arc or incandescent light is furnished from a municipal plant, while in a large number of the states the list is so infinitely small that they would hardly be noticed, and nearly all of them in small villages.

State.	Private Companies.		Municipal Plants.	
	Arc.	Incandescent.	Arc.	Incandescent.
Alabama	2,802	36,275	86	1,300
Arizona	215	13,480	.....	.....
Arkansas	993	25,850	247	876
California	9,745	355,490	241	3,900
Colorado	3,584	226,290	15	350
Connecticut	5,281	134,538	185	5,500
Deleware	200	22,500	13	5,200
Florida	1,552	16,600	284	10,900
Georgia	3,962	87,228	352	9,485
Idaho	284	10,660	.....	.....
Illinois	15,102	691,287	5,299	38,669
Indiana	9,622	175,060	2,004	47,200
Iowa	4,780	232,290	508	40,995
Kansas	2,724	75,125	378	1,865
Kentucky	3,302	102,297	410	500
Louisiana	2,546	70,150	7	2,000
Maine	2,435	102,525	250	6,000
Maryland	725	27,650	76	.....
Massachusetts	20,317	732,515	2,027	33,500
Michigan	9,328	383,695	4,671	68,750
Minnesota	5,352	165,835	748	48,268
Mississippi	915	20,800	55	3,300
Missouri	8,439	357,330	1,113	25,170
Montana	1,474	74,225	64	1,555
Nebraska	1,754	64,670	199	5,520
Nevada	203	3,500	....	.....
New Hampshire	2,317	137,170	....	.....
New Jersey	16,039	427,221	80	7,200
New York	46,233	1,440,133	1,223	11,900
North Carolina	863	36,355	204	3,507
North Dakota	221	11,050	131	2,750
Ohio	21,050	488,937	3,080	55,742
Oklahoma	276	6,040	....	.....
Oregon	1,979	49,595	30	775
Pennsylvania	34,444	984,245	2,363	24,370
Rhode Island	4,537	122,668	....	.....
South Carolina	616	14,300	179	3,751
Tennessee	2,512	92,100	190	6,490
Texas	3,278	126,380	673	16,952
Utah	930	28,100	13	700
Vermont	1,403	76,350	81	17,300
Virginia	2,170	42,325	308	1,763
Washington	2,717	76,400	713	7,300
West Virginia	936	53,590	490	.....
Wisconsin	4,997	167,370	80	3,450
	264,124	8,588,194	8,905	522,257

MUNICIPAL OWNERSHIP INCREASES TAXES.

In Austin, Texas, before the municipal plant was established. the tax rate was 90 cents on $100, now it is $2.30½ on $100.

Braintree, Mass., tax levy in 1897 was $17.20 on $1,000, now it is $20.40.

Chicopee, Mass., levy in 1897 was $13.80 on $1,000, now it is $18.

Middleborough, Mass., tax levy in 1897 was $16.66 on $1,000, now it is $20.65.

Needham, Mass., in 1897 was $12.60 on $1,000, now it is $17.

Peabody, Mass., tax levy in 1897 was $15 on $1,000, now it is $17.40.

Reading, Mass., levy in 1897 was $15.50 on $1,000, now it is $17.50.

Paris, Tenn., before municipal plant was installed, tax rate was 45 cents on $100, now it is $1 on $100, and no sinking fund to pay bonds.

Union City, Tenn., before plant was purchased, tax was $1.10 on $100, now it is $1.40, and this does not provide a sinking fund for bonds, and they had to levy a special tax of 10 cents on $100 for that purpose.

Humboldt, Tenn., tax rate was $1 on $100, now it is $1.50, and they have to levy a special tax to pay bonds.

Northfield, Vt., before municipal plant was installed, tax levy was 30 cents on $1, now it is 50 cents on $1.

REPORTS OF INVESTIGATING COMMITTEES APPOINTED BY CITY COUNCILS WORTHLESS AND UNRELIABLE.

A committee from Mobile investigated cost of lights at Little Rock, and reported the same to be $51 pear year, the Scranton committee made cost $47, while Connorsville report said it was $42, and Steubenville claimed it was $60, and Youngstown went them one better and called it $69.83, but the city clerk of Little Rock reported to the mayor that lights cost $80.83 per lamp per year.

MUNICIPAL PLANTS IN SMALL PLACES.

Nearly all municipal plants are in small places not large enough to support a private company and they are compelled to install a municipal plant in order to obtain the light.

There is only one plant in Arkansas in a place large enough for a private company, one in California, one in Florida, six in Illinois, four in Indiana, one in Iowa, one in Kansas, one in Kentucky, two in Maine, three in Massachusetts, four in Michigan, two in Missouri, four in New York, six in Ohio, four in Pennsylvania, three in Texas, three in Virginia, one in West Virginia; none in Colorado, Connecticut, Delaware, Georgia, Louisiana, Maryland, Minnesota, Mississippi, Montana, Nebraska, New Hampshire, New Jersey, North Carolina, Oregon, South Dakota, Tennessee, Utah, Vermont, Washington or Wisconsin.

It appears from the latest reports that, of the 325 municipal plants, 219 are in places of less than 3,000 population, 78 in villages between 3,000 and 10,000, and only 38 in the entire United States in cities of over 10,000 inhabitants.

VERY FEW MUNICIPAL PLANTS IN CITIES WHERE THERE ARE PRIVATE PLANTS.

An examination of the last reports of municipal plants discloses the fact that in the following states not a municipal plant is operated in any city where there is a private plant: Alabama, Arizona, Colorado, Connecticut, Delaware, Georgia, Idaho, Massachusetts, Minnesota, Mississippi, Louisiana, Montana, Nevada, New Hampshire, New Jersey, New Mexico, North Carolina, North Dakota, Oklahoma, Oregon, Rhode Island, South Carolina, South Dakota, Tennessee, Utah, Vermont, Wisconsin, Wyoming; while Arkansas has only one, California one, Illinois six, Indiana two, Iowa two, Kansas two, Kentucky two, Maine two, Maryland one, Michigan five, Missouri one, Nebraska one, New York three, Ohio three, Pennsylvania three, Texas three, Virginia one, Washington one, West Virginia one.

EXTRACTS FROM A REPORT MADE TO THE CITY OF BROOKLINE, MASS.

Wishing to secure the best results, the mayor employed ex-mayor Matthews, of Boston, to make a thorough investigation of the two systems of street lighting, viz.: Municipal ownership and contract plan with private company. His report is as follows:

"That my prices are higher than those frequently set up by theoretical advocates of municipal ownership is due, first, to the very general omission by the latter of adequate allowances (when any are made at all) for interest, depreciation, insurance and taxes; and, secondly, to the fact that

many, in fact, nearly all, of the official accounts published by municipal corporations of the operation of their electric light plants fail to include among the actual expenses of operation many items which should properly be charged thereto, such as general office or administrative expenses, rent, salaries, etc.

"I simply append a table, prepared by me with the same care and on substantially the same basis as the estimates for your board, of the actual cost of arc lights in some of the municipalities commonly cited as proof of the ability of the public to operate an electric light plant at figures far below those given by the experts employed in this investigation; and in the same table, in a parallel column, will be found the annual cost of these same plants as claimed with wide advertisement throughout the country by some of the professional advocates of municipal ownership:

TABLE SHOWING ALLEGED AND REAL ANNUAL COST PER LAMP OF CERTAIN MUNICIPALITIES.

Town or City.	Number of lights.	Candle power.	Alleged annual cost as made by the advocates of municipal ownership.	Real annual cost as found by ex-mayor Matthews.
*†Bangor, Me	150	2,000	$48 00	$79 00
*†Lewiston, Me	100	2,000	55 00	65 50
Peabody, Mass	150	1,200	62 00	100 05
Bay City, Mich	181	2,000	58 00	76 25
†Goshen, Ind	31	2,000	77 00	111 54
†Bloomington, Ill	240	2,000	51 00	93 64
Chicago, Ill	1,100	2,000	96 00	181 83
Elgin, Ill	98	2,000	43 00	100 73
†Aurora, Ill	200	2,000	70 00	87 57
†Fairfield, Ia	16	2,000	70 00	117 16
*Ypsilanti, Mich	88	2,000	36 00	77 84

*These plants are run by water-power.

†These plants are operated in connection with other works.

Brookline made contract with private company for lights.

When the ten year contract for the street lights in Boston was made, mayor Quincy employed ex-mayor Matthews to make a thorough investigation, and the contract was based upon facts disclosed in his report.

COST OF LIGHTS WHEN FURNISHED BY PRIVATE COMPANIES.

In the following table the hours run are the exact time lights were burned, as shown by the station records, and the yearly basis of the cost per hour and candle power for one cent are the same as recorded on the books of each company.

As many are given as space would permit:

		Private Company.	Coal.	Hours run.	Cost per hour.	Candle power per hour for one cent.
No.	1.	Michigan.....	$2 25	4,000	$ .0195	615
"	2.	Oregon	.....	1,500	.042	404
"	3.	Michigan.....	2 15	1,500	.04	1,000
"	4.	New Jersey.....	3 25	2,000	.04	300
"	5.	Pennsylvania	60	4,000	.0187	1,069
"	6.	Kansas.....	1 90	2,100	.0314	636
"	7.	South Carolina...	W. P.	2,100	.0171	701
"	8.	Wisconsin	4 25	4,000	.0162	987
"	9.	Illinois.....	1 00	4,200	.0214	934
"	10.	Ohio.....	1 65	2,400	.0283	424
"	11.	Georgia.....	W. P.	4,500	.0155	1,290
"	12.	Illinois	1 30	2,200	.0383	524
"	13.	Ohio.....	1 45	4,000	.0209	957
"	14.	California.....	6 75	2,200	.043	465
"	15.	Michigan.....	W. P.	4,000	.0118	1,695
"	16.	New York.....	2 15	4,000	.0189	634
"	17.	Indiana.....	1 90	1,500	.046	434
"	18.	Ohio.....	2 30	2,200	.0454	440
"	19.	Montana.....	3 75	4,000	.03	666
"	20.	Pennsylvania	1 10	4,000	.02	1,000
"	21.	Montana.....	2 00	4,000	.024	500
"	22.	Pennsylvania	66	4,000	.0175	1,142
"	23.	Nebraska	3 00	4,300	.0293	682
"	24.	California	2 50	4,000	.024	833
"	25.	Pennsylvania	N. G.	4,000	.0162	925
"	26.	Pennsylvania	N. G.	4,000	.0178	1,123
"	27.	Illinois	1 50	1,403	.0296	405
"	28.	Pennsylvania	2 10	4,000	.024	833
"	29.	Wisconsin.....	2 25	2,550	.0267	749
"	30.	Illinois	65	2,170	.0345	579
"	31.	New York.....	2 10	4,300	.0229	873
"	32.	Connecticut.....	3 00	4,000	.0237	506
"	33.	Michigan	W. P.	4,500	.0155	774
"	34.	Iowa	2 25	1,500	.04	500
"	35.	Colorado.....	1 40	2,300	.0426	469
"	36.	Tennessee.....	1 25	2,200	.0314	636
"	37.	Indiana.....	75	2,200	.0272	735

	Private Company.	Coal.	Hours run.	Cost per hour.	Candle power per hour for one cent.
No. 38.	Wisconsin.....	W. P.	4,000	$ .0212	943
" 39.	Tennessee.....	$ 1 65	4,000	.0217	921
" 40.	West Virginia....	90	2,200	.0327	366
" 41..	New Jersey.....	1 85	4,300	.0279	716
" 42.	Tennessee.....	1 75	4,000	.024	833
" 43.	New Hampshire..	6 50	4,000	.0187	641
" 44.	Georgia.....	W. P.	2,868	.0296	675
" 45.	Ohio.....	1 50	4,000	.0162	740
" 46.	Illinois	1 75	2,200	.0318	628
" 47.	Iowa.....	1 25	3,000	.03	666
" 48.	Indiana.....	1 80	4,000	.0187	1,069
" 49.	Illinois	1 25	1,400	.0257	467
" 50.	Pennsylvania	1 35	4,000	.0192	1,041
" 51.	Colorado.....	1 10	3,000	.04	500
" 52.	Texas.....	3 35	4,200	.0257	778
" 53.	South Dakota....	3 50	4,500	.04	500
" 54.	Connecticut.....	4 65	1,743	.04	300
" 55.	Pennsylvania	2 00	4,000	.018	1,111
" 56.	Ohio.....	1 05	3,000	.0256	781
" 57.	Ohio.....	1 67	3,674	.0217	921
" 58.	Maine.....	W. P.	2,000	.0375	533
" 59.	Indiana.....	2 40	4,000	.0168	1,190
" 60.	Oregon	2 50	4,500	.024	833
" 61.	Wisconsin	4 00	4,000	.0185	1,081
" 62.	Ohio.....	1 90	4,000	.0206	970
" 63.	Pennsylvania	1 50	4,200	.0147	1.360
" 64.	Indiana.....	N. G.	4,200	.02	1,000
" 65.	New York.....	2 25	4,000	.02	600
" 66.	West Virginia....	1 40	4,000	.02	1,000
" 67.	North Dakota....	6 50	4,200	.0285	701
" 68.	Indiana.....	2 10	4,000	.015	1,333
" 69.	Ohio.....	1 70	4,000	.0225	888
" 70.	Virginia.....	W. P.	2,000	.0375	320
" 71.	Ohio.....	1 25	4,000	.0173	1,156
" 72.	Indiana.....	1 60	4,000	.0225	888
" 73.	New York.....	W. P.	2,200	.0272	735
" 74.	Connecticut.....	3 00	2,200	.05	240
" 75.	North Carolina...	3 35	2,500	.035	342
" 76.	Ohio.....	3 00	3,600	.0234	854
" 77.	Montana.....	W. P.	4,500	.024	833
" 78.	Pennsylvania	60	4,000	.02	1,000
" 79.	Illinois	1 25	2,100	.0342	584
" 80.	Wisconsin.....	1 75	2,200	.034	352
" 81.	New York	2 25	3,500	.0228	886
" 82.	New York.....	3 85	4,200	.0219	547
" 83.	New York.....	3 50	4,500	.0192	1,041
" 84.	Alabama.....	1 75	4,000	.0225	888
" 85.	Texas.....	3 00	4,000	.027	740
" 86.	Michigan	2 65	1,500	.04	500
" 87.	Texas.....	4 25	4,000	.03	666
" 88.	Pennsylvania	2 00	4,200	.0196	1,020
" 89.	Pennsylvania	2 25	1,400	.0385	519
" 90.	Michigan	2 75	4,000	.0225	533
" 91.	West Virginia....	1 00	4,000	.0225	888
" 92.	West Virginia....	2 50	2,200	.034	352
" 93.	Ohio.....	1 65	2,200	.0397	507
" 94.	Michigan	2 50	1,500	.033	454
" 95.	New York.....	2 25	4,000	.0237	843

		Private Company.	Coal.	Hours run.	Cost per hour.	Candle power per hour for one cent.
No.	96.	North Dakota.....	$ 5 25	1,500	$ .066	307
"	97.	Pennsylvania	1 30	4,000	.015	800
"	98.	Pennsylvania	1 00	4,200	.0178	1,123
"	99.	New York.....	3 95	4,000	.021	571
"	100.	Wisconsin.....	3 65	4,000	.015	800
"	101.	Ohio.....	80	2,200	.0272	441
"	102.	Iowa.....	1 88	2,586	.028	714
"	103.	Michigan	1 40	4,000	.0168	1,190
"	104.	Ohio.....	1 80	4,200	.0209	956
"	105.	Wisconsin.....	1 75	2,500	.028	714
"	106.	Indiana.....	N. G.	4,000	.0175	1,142
"	107.	New York.....	2 86	4,000	.0214	560
"	108.	Minnesota.....	3 50	4,000	.024	833
"	109.	New York.....	2 85	4,000	.0243	823
"	110.	Kentucky.....	1 25	4,000	.02	1,000
"	111.	Nebraska	2 25	4,000	.03	666
"	112.	Pennsylvania	2 10	4,200	.0171	1,169
"	113.	New Hampshire..	W. P.	3,650	.0205	585
"	114.	New York.....	2 05	4,000	.0195	1,025
"	115.	Illinois	3 75	1,728	.0416	480
"	116.	Indiana.....	1 50	4,000	.02	1,000
"	117.	Tennessee.....	2 25	4,200	.02	1,000
"	118.	Wisconsin.....	1 25	4,000	.025	800
"	119.	Ohio.....	2 29	1,500	.05	400
"	120.	Pennsylvania	1 15	4,400	.0218	917
"	121.	Ohio.....	1 85	3,000	.028	961
"	122.	Connecticut.....	3 40	3,500	.0285	701
"	123.	Alabama.....	2 90	4,000	.022	909
"	124.	Georgia.....	2 80	4,000	.025	800
"	125.	Wisconsin.....	4 00	4,000	.0225	888
"	126.	Wisconsin.....	3 55	4.000	.02	600
"	127.	Wisconsin.....	3 00	2,150	.03	400
"	128.	Michigan	3 00	4,000	.0175	685
"	129.	Pennsylvania	1 75	4,000	.018	1,111
"	130.	Pennsylvania	2 55	1,400	.033	484
"	131.	New York.....	3 00	4,000	.0179	670
"	132.	Illinois	1 50	4,000	.018	1,111
"	133.	Ohio.....	1·75	4,000	.0207	966
"	134.	Pennsylvania	W. P.	4,400	.0204	980
"	135.	Connecticut.....	3 60	3,300	.0333	600
"	136.	California.....	W. P.	4,000	.021	761
"	137.	New Hampshire..	4 25	4,000	.028	428
"	138.	Pennsylvania	.....	4,500	.0155	1,290
"	139.	Pennsylvania	1 25	4,000	.0195	1,025
"	140.	Tennessee.....	1 70	4,000	.0212	943
"	141.	Virginia.....	2 41	4,000	.0145	827
"	142	Wisconsin.....	3 50	2,200	.0354	338
"	143.	Ohio.....	1 50	2,150	.0348	574
"	144.	Maine.....	5 00	1,400	.0251	478
"	145.	Rhode Island	3 00	4,000	.0369	542
"	146.	Connecticut.....	3 00	4,000	.0228	526
"	147.	Arkansas.....	3 45	4,200	.0385	529
"	148.	Illinois.....	50	4,000	.0118	1,111
"	149.	Colorado.....	6 75	2,900	.033	606
"	150.	Wisconsin.....	3 00	1,500	.0366	336
"	151.	Wisconsin.....	3 00	3,500	.0191	628
"	152.	Michigan	2 00	2,200	.0318	628
"	153.	Texas.....	2 85	2,200	.0318	377

	Private Company.	Coal.	Hours run.	Cost per hour.	Candle power per hour for one cent.
No. 154.	Pennsylvania	$ 70	4,000	$ .021	952
" 155.	New York.....	1 56	4,000	.0186	645
" 156.	West Virginia....	1 50	4,000	.0218	917
" 157.	Pennsylvania	1 00	4,000	.0187	1,069
" 158.	Iowa.....	1 25	4,000	.02	1,000
" 159.	Indiana.....	N. G.	4,700	.0175	1,142
" 160.	New York.....	2 90	4,200	.0173	1,156
" 161.	New York.....	2 45	4,400	.0236	847
" 162.	Wisconsin.....	4 00	3,000	.028	428
" 163.	North Carolina...	3 12	4,000	.0186	645
" 164.	Illinois	2 00	2,200	.0272	735
" 165.	Minnesota.....	3 55	4,000	.0225	888
" 166.	Wisconsin.....	2 75	3,000	.0193	621
" 167.	Wisconsin.....	2 80	1,500	.056	214
" 168.	Missouri.....	1 25	4,000	.02	1,000
" 169.	New York.....	2 10	4,000	.0227	881
" 170.	Ohio.....	2 00	2,200	.0329	607
" 171.	New Jersey.....	3 00	4,000	.025	480
" 172.	New York.....	2 90	4,200	.02	1,000
" 173.	Colorado.....	8 00	4,000	.0252	793
" 174.	Washington.....	2 50	4,000	.024	833
" 175.	Minnesota.....	W. P.	4,000	.0187	1,069
" 176.	Colorado.....	8 00	2,200	.0545	366
" 177.	Texas.....	1 60	3,000	.03	666
" 178.	Colorado.....	3 50	2,200	.0485	412
" 179.	Utah.....	2 50	4,200	.0171	1,169
" 180.	Pennsylvania	1 70	4,000	.019	1,052
" 181.	Wisconsin.....	3 00	4,000	.0237	843
" 182.	Tennessee.....	2 00	4,500	.0213	938
" 183.	Pennsylvania.....	1 35	4,000	.0162	1,234
" 184.	Georgia.....	2 60	2,250	.032	628
" 185.	Ohio..	2 10	4,000	.0222	900
" 186.	Alabama.....	2 20	3,000	.03	666
" 187.	Ohio.....	2 00	4,000	.0218	917
" 188.	Pennsylvania	2 80	4,000	.0187	641
" 189.	Michigan	1 50	2,200	.0318	377
" 190.	Connecticut.....	3 17	4,500	.0266	451
" 191.	Pennsylvania	1 75	4,000	.0187	1,078
" 192.	Iowa.....	2 25	1,800	.036	333
" 193.	Michigan	2 50	4,000	.0145	862
" 194.	Michigan	W. P.	1,500	.044	454
" 195.	Pennsylvania	1 40	3,000	.02	1,000
" 196.	Indiana.....	1 10	4,000	.0187	1,069
" 197.	New Jersey.....	3 00	4,000	.0246	813
" 198.	New York.....	3 25	4,500	.0222	540
" 199.	Mississippi.....	2 95	2,000	.05	500
" 200.	Ohio.....	2 35	2,300	.0352	568
" 201.	Washington.....	5 00	3,800	.0263	456
" 202.	Wisconsin.....	1 25	4,200	.0328	607
" 203.	Iowa.....	1 40	2,200	.0327	366
" 204.	New York.....	2 00	2,000	.033	606
" 205.	Minnesota.....	4 00	2,300	.0365	328
" 206.	Texas	2 50	4,500	.0266	751
" 207.	Delaware.....	2 45	4,000	.025	800
" 208.	Pennsylvania	2 20	3,700	.03	666
" 209.	Pennsylvania	1 05	4,000	.019	1,052
" 210.	Ohio.....	1 40	2,800	.0214	934
" 211.	Iowa.....	1 80	2,200	.03	400

	Private Company.	Coal.	Hours run.	Cost per hour.	Candle power per hour for one cent.
No. 212.	Wisconsin.....	$ 2 00	4,000	$ .02	1,000
" 213.	Pennsylvania	N. G.	4,000	.0218	550
" 214.	Pennsylvania	85	4,000	.016	1,251
" 215.	Wisconsin.....	.....	4,000	.02	1,000
" 216.	Ohio.....	1 60	4,000	.02	1,000
" 217.	Rhode Island	3 90	1,500	.05	240
" 218.	Connecticut.....	4 00	4,000	.025	480
" 219.	New York.....	W. P.	4,000	.0182	1,098
" 220.	Ohio.....	80	2,000	.0367	544
" 221.	Nebraska	2 55	1,500	.08	250
" 222.	Ohio.....	1 40	2,300	.0278	719

MUNICIPAL PLANTS AND THE COST OF LIGHTS PER HOUR, AND CANDLE POWER PER HOUR FURNISHED FOR ONE CENT.

In the following table the candle power of lamps and the hours burned are the actual time, in each case, that lights were operated, as shown by the city records.

Reducing the time in each place to the actual hours lights were burned, and the cost per hour, with the candle power per hour furnished for one cent, places each upon the same basis, and shows the true cost of lights, also the returns cities are receiving for the money paid, and it is immaterial whether they are using 1,200 or 2,000 candle power lamps.

This is the only true method of comparison.

City.	Cost of coal.	Hours run.	Cost per hour.	Candle power per hour for one cent.
Abingdon, Va.....	$3 00	4,000	$ .027	592
Ames, Ia.....	1 55	1,500	.0836	239
Atkin, Minn..	.....	2,000	.035	342
Athens, Ala	2 00	1.200	.0233	686
Anderson, Ind.....	N. G.	2,000	.0222	900
Adrian, Mich.....	...	1,500	.0686	174
Arlington, Minn.....	.....	1,200	.0895	134
Allegheny, Pa..... ..	1 00	5,976	.0197	1,010
Aurora, Ill.....	1 75	2,500	.031	645
Ashtabula, Ohio.....	2 05	2,000	.0568	352
Alexandria, Va.....	.....	3,750	.0195	769

City.	Cost of coal.	Hours run.	Cost per hour.	Candle power per hour for one cent.
Alexandria, Minn	.....	1,500	$ .0828	241
Atlantic, Ia	$ 1 50	2,200	.0518	386
Atlantic Highlands, N. J	.....	2,000	.0375	533
Bay City, Mich	1 50	2,000	.0261	766
Bellevue, Iowa	.....	3,800	.0212	566
Bloomington, Ill	1 95	2,555	.0366	540
Bethany, Mo	3 00	2,200	.0397	302
Belmont, Mass	.....	1,478	.0812	147
Braintree, Mass	.....	2,300	.039	307
Batavia, N. Y	1 77	3,600	.0213	938
Bangor, Me	W. P.	4,000	.0152	789
Bowling Green, Ky	1 28	2,200	.0387	516
Blue Island, Ill	.....	1,875	.0451	443
Carthage, Ohio	2 00	3,000	.0288	694
Clyde, Ohio	1 76	1,500	.057	350
Columbus, Ind	1 50	2,000	.0334	598
Catawissa, Pa	1 00	4,000	.0189	1,058
Chariton, Ia	1 25	2,500	.0527	227
Chicago, Ill	2 50	4,000	.0235	851
Council Grove, Kan	.....	1,875	.0779	154
Conneaut, Ohio	.....	2,000	.0245	489
Chambersburg, Pa	.....	4,000	.023	869
Columbia City, Ind	2 10	3,000	.0339	589
Chicopee, Mass	.....	3,000	.0365	328
Decatur, Ill	1 25	2,100	.035	571
Danvers, Mass	.....	1,742	.032	375
Danville, Va	.....	4,000	.0155	774
Dawson, Ga	2 80	2,000	.0464	258
Dunkirk, N. Y	1 30	3,000	.0263	760
Elberton, Ga	W. P.	2,000	.035	342
Elgin, Ill	2 00	2,500	.0316	632
Emons, Pa	.....	2,190	.0511	391
Estherville, Ia	2 50	1,500	.0271	442
Easton, Pa	.....	3,800	.0307	651
Fremont, Neb	3 35	2,000	.0278	431
Fayette, Mo	2 00	1,500	.086	232
Fairfield, Ia	2 25	1,954	.052	384
Fulton, Mo	1 75	3,000	.039	512
Fort Worth, Tex	3 10	2,000	.0364	329
Fredonia, N. Y	2 00	1,500	.0384	520
Frederick, Md	2 50	2,200	.0443	451
Granville, Ohio	1 25	1,320	.0454	440
Grandledge, Mich	.....	1,460	.11	181
Greenwich, Ohio	1 35	1,500	.0664	301
Galveston, Tex	5 00	3,000	.034	588
Greenfield, Ind	.....	1,500	.05	400
Griffin, Ga	.....	2,200	.0343	583
Goshen, Ind	2 95	2,400	.0246	813
Henderson, Minn	4 00	.....	.0333	240
Hingham, Mass	.....	1,560	.0479	250
Hannibal, Mo	1 55	2,500	.0458	436

City.	Cost of coal.	Hours run.	Cost per hour.	Candle power per hour for one cent.
Hudson, Mass.	.....	1,653	.0799	250
Huntington, Ind.	.....	2,190	$ .0491	408
Hubbard, Ohio.	$ 1 65	1,260	.038	526
Henderson, Ky.	75	2,000	.0311	643
Hamilton, N. Y.	3 10	2,200	.044	272
Higginsville, Mo.	1 80	1,500	.0444	270
Herrington, Kan.	.....	1,825	.14	136
Holland, Mich.	.....	2,000	.0416	480
Herkimer, N. Y.	2 50	3,294	.0256	781
High Point, N. C.	4 10	1,500	.0302	397
Jacksonville, Fla.	.....	4,000	.0233	858
Jackson, Ohio.	.....	2,000	.0375	533
Jacksonville, Ill	1 74	2,000	.027	740
Jamestown, N. Y.	1 45	4,000	.0229	524
Kalamazoo, Mich.	2 45	3,000	.0295	677
Kendallville, Ind.	2 25	2,000	.022	909
Lowell, Mich.	W. P.	1,500	.043	431
Lisbon, Ia.	2 50	1,500	.032	625
Logansport, Ind.	N. G.	4,000	.024	833
Lewiston, Me.	W. P.	4,000	.0178	674
Lansing, Mich.	2 25	4,000	.0253	790
Miamisburg, Ohio.	1 72	2,000	.0395	506
Marseilles, Ill.	W. P.	3,500	.0148	1,351
Montpelier, Ohio.	2 50	1,500	.0465	430
Mattoon, Ill.	75	2,000	.0297	673
Mishawaska, Ind.	1 98	2,200	.05	400
Muncie Ind.	2 65	3,200	.0209	956
Meadville, Pa.	2 16	3,500	.02	1,000
Marietta, Ohio.	N. G.	4,000	.0213	938
Martin's Ferry, Ohio.	61	3,000	.0285	701
Marshall, Mich.	W. P.	2,000	.0404	495
Mount Pleasant, Ia.	1 95	2,000	.0161	496
Marblehead, Mass.	.....	3,000	.0229	689
Middleborough, Mass.	.....	1,272	.08	150
Madisonville, Ohio.	1 85	1,500	.0378	317
Marion, Ind.	N. G.	2,000	.0281	711
Morgan Park, Ill.	1 85	1,400	.03	666
Marquette, Mich.	W. P.	4,000	.0263	760
Morrisville, Vt.	W. P.	1,500	.0809	247
North East, Pa.	1 95	1,500	.04	500
Newbury, S. C.	3 35	2,000	.035	571
Ortonville, Minn.	6 00	2,000	.0692	289
Ovid, Mich.	2 66	1,500	.0688	290
Osage City, Kan.	1 90	1,500	.0355	563
Oxford, Ohio.	2 60	1,500	.051	392
Painesville, Ohio.	2 15	2,000	.0353	566
Portland, Mich.	W. P.	1,500	.03	400
Paducah, Ky.	1 00	3,000	.0316	632
Paris, Ill.	2 25	3,000	.0173	693
Paw Paw, Mich	W. P.	1,400	.0289	553
Plain City, Ohio.	2 00	1,500	.0422	473

City.	Cost of coal.	Hours run.	Cost per hour.	Candle power per hour for one cent.
Pawnee City, Neb	$ 3 25	1,500	$ .0543	368
Quitman, Ga	1 50	2,000	.0484	413
Quakertown, Pa	2 10	3,000	.025	470
Rock Falls, Ill	.....	2,000	.0416	480
Rochelle, Ill	2 15	1,200	.0416	480
Reading, Mass	.....	2,532	.0354	338
Rensselaer, Ind	1 95	2,000	.0443	270
Rushville, Ind	.....	2,190	.0750	266
St. Clair, Pa	1 00	2,000	.0365	563
South Boston, Va	.....	1,500	.0467	256
Salem, Va	81	1,500	.0376	319
St. Peters, Minn	3 15	1,500	.0476	420
Sherman, Tex	2 50	4,000	.0211	948
Springville, N. Y	W. P.	4,000	.0155	1,290
Shelby, Ohio	1 85	2,000	.0409	488
Statesville, N. C	1 50	2,000	.0466	257
Somerville, Tenn	2 65	1,500	.0438	456
St. Charles, Mo	1 85	2,000	.0393	508
South Norwalk, Conn	.....	1,900	.0476	294
Stanton, Ill	58	2,000	.034	588
Smyrna, Del	2 35	2,300	.042	283
Shelby, Mich	2 10	1,500	.0333	360
Shickshinny, Pa	85	2,200	.035	571
Santa Clara, Cal	2 30	1,200	.0549	364
St. Joseph, Mo	1 20	2,200	.039	512
Swanton, Vt	W. P.	3,000	.058	344
Salem, Ill	1 50	1,500	.0293	682
Santa Cruz, Cal	.....	1,500	.0732	273
Taunton, Mass	.....	2,144	.034	352
Titusville, Pa	N. G.	3,500	.0157	1,273
Topeka, Kan	2 00	2,000	.0335	597
Tarentum, Pa	1 50	4,000	.0239	502
Vinton, Ia	1 88	1,800	.0286	409
Wheeling, W. Va	1 09	4,000	.0225	800
Westfield, N. Y	2 10	3,120	.0164	1,219
Waseca, Minn	2 85	1,500	.0507	394
Wakefield, Mass	.....	1,365	.06	200
Williston, Ohio	80	2,000	.0318	377
Winterset, Ia	.....	1,400	.0335	358
Watervliet, N. Y	.....	4,000	.0247	809
Ypsilanti, Mich	W. P.	1,900	.0273	732

CORRECT COMPARISON OF LIGHTS.

The cost per year of a lamp is not a correct or proper basis for ascertaining the cost of lights.

The fact that the yearly cost of a lamp is low is no criterion that the light is cheap.

One plant may burn a 1,200 candle power lamp a few hours per night during certain nights each month, while another plant burns a 2,000 candle power lamp all night every night.

As an illustration, compare Hubbard, Ohio, where the yearly cost is $48 per lamp, but they were burned only 1,260 hours per year, and when the cost per hour is calculated it is .038 cents per hour, and the candle power per hour furnished for one cent is 526, while at Chambersburg, Pa., the annual cost is $92, but the lights are burned 4,000 hours per year, and the cost per hour is only .023 cents, and the candle power per hour furnished for one cent is 869, showing that, notwithstanding the annual rate at Chambersburg is nearly twice as much as at Hubbard, the cost per hour is .015 cents less, and they furnish 343 more candle power per hour for one cent.

AVERAGE COST IN PRIVATE AND PUBLIC PLANTS.

An examination of the reports discloses the fact that private companies, on an average, furnish the lights for 3,380 hours per year, while the municipal plants average 2,307 hours per year.

Showing that the private companies furnish the lights for 1,073 more hours per year than the municipal plants.

The cost per hour in the municipal plants average

.0397 cents per hour, and with private companies cost is .0264 cents per hour, being .0133 cents per hour less.

Also, that private companies furnish, on an average, 750 candle power per hour for one cent, and the municipal plants 528 candle power per hour for one cent. Therefore, municipalities, who contract with private companies, receive 222 more candle power per hour for one cent than is produced in the municipal plants.

COST WHEN TRUE ACCOUNTS ARE RENDERED.

Scores of statements have been made by the advocates of municipal ownership, showing that the total cost, in certain cities, of an arc light, where city owned the plant, was from $25 to $50 per year.

Yet, when the gas and electric light commissioners of Massachusetts, who are furnished with sworn statements of the municipal plants, and then send an expert to examine their books and verify the costs, and find that the average, of all the municipal plants in the state using 1,200 candle power arc lights, is $99.45, only burned 2,148 hours per year. How are these advocates of municipal ownership to explain the reason for this great difference in the cost in Massachusetts and the plants which they quote. Of course, there can be but one reason given in Massachusetts, the true facts and actual cost is shown, while in the cases reported by these advocates in other cities, they simply give a part of the operating expenses, and the rest are charged to other departments, and interest, depreciation, taxes, and sinking fund, are entirely ignored, as is shown in the report of Chief Walker of Philadelphia, when he reported cost of operating a municipal plant:

Made no charge for the services of a superintendent.

No provision for a machinist.

No charge for the removal of ashes.

No charge in the cost of maintenance for repairs to engines, boilers, dynamos, lamps, etc.

No charge for the use of a horse and wagon.

No provision for insurance.

No charge for water that would be consumed.

No provision for repairs to real estate.

No charge for lost taxes.

No charge for interest.

AN ECONOMIC TRUTH.

In the reports made of all municipal plants in Massachusetts, the cost per lamp per year, hours burned, candle power, interest, depreciation, etc., are taken from the report of the Gas and Electric Light Commissioners, and made up by the commission. Therefore, there can be no question as to their accuracy.

In Massachusetts, the real condition and results are shown, and all the facts revealed, and the commissioners of the state vouch for their truthfulness. The municipal plants in that state are as well equipped as any in the country, and can produce the lights at as low a rate as any. If the taxes were added, it would make a still more unfavorable showing for the municipal plants. That the economic truth involved in this condition of municipal ownership is beginning to be recognized and understood seems to be indicated by the adverse action taken during the past year by tax payers in a number of Massachusetts towns.

COMPARATIVE COST OF INCANDESCENTS, AS SHOWN BY MASSACHUSETTS REPORTS.

The Massachusetts Gas and Electric Light Commissioners' report shows that the cost per year of 25 candle power street incandescent lamps was $14.75, for one town $22.88, for two others, $25.62 and $30.28, respectively. The same report shows that private companies are charging for the same class of lamps from $12 to $16 per year.

These figures for municipal plants do not include taxes, if they were added it would make the comparison still more unfavorable. One would expect as good results in Massachusetts as in any state, but the result shows that the cost of public lighting exceeds what it would be under private ownership.

The same report shows that the operating expenses for 1899 of the municipal electric plants were $14,190.75 more than they were the year previous, while the receipts only increased $7,103.24.

Belmont burned 25 candle power incandescents 5.5 hours per night for 22.4 nights per month, at a cost of $30.28 per year per lamp, and charged private parties 20 cents per kilowatt for incandescents, and customers pay for renewals.

Braintree burned 25 candle power incandescents 7.7 hours per night for 24.8 nights per month, at a cost of $22.48 per lamp per year, and charge to private customers for incandescent lights was 6 mills per ampere hour. Customers pay for renewals.

Hudson burned 25 candle power incandescents 4.8 hours per night for 28.7 nights per month, at a cost of $22.88 per year, and charged for incandescent lights 20 cents per kilowatt. Customers pay for renewals.

Middleborough burned 25 candle power incandescents 4.4 hours per night for 24.1 nights per month, at a cost of $25.62 per year per lamp, and charge to private customers was 15 cents per kilowatt. Customers pay 25 per cent above cost for renewals.

EXPERIENCE OF MUNICIPALITIES WHO OWN PLANTS.

MUNCIE, Ind. The superintendent says that as a general rule they are unsatisfactory.

METROPOLIS, Ill. Superintendent says municipal plants are not as economical as they should be and are not managed as they should be. It seems as though there is no one to go ahead and carry out things.

HERRINGTON, Kan. Superintendent says a good man cannot do much in a year.

WELLS, Minn. Superintendent says: I do not believe in municipal ownership of electric plants, as too much political influence is brought to bear on it, and the plant suffers from it both as to management and economy.

HOLLAND, Mich. President says: I am inclined to the opinion that there would be a chance for corruption and appointment of favorites and for political influence.

JACKSON, Ohio. Superintendent says: This plant is run by a committee from the council which is changed every year, so we get new management every year that does not become acquainted with the work until changed; the attention is not paid to details as would be by a private company.

OXFORD, Ohio. City trustee says: We believe that they can be operated in towns say of 3,000 people, but not in larger on account of political affairs being so often mixed up with them.

DeGRAFF, Ohio. Manager says: A committee of the council in nine cases out of ten will put their judgment up against a man of years of experience in the management of plants.

WILMINGTON, Ohio. Superintendent says: In my experience no plant should be run by any municipal corporation, for there are so many that want to be boss, and too many free lights.

GRAND HAVEN, Mich. The board and council have quarreled over the city electrician, who has resigned; the board accuses the council of desiring to put men in charge of the electric light plant who are related to certain aldermen. The council accuses the board of creating liability without reference to the city council, and have ordered the treasurer to pay no bills unless approved by the council.

QUAKERTOWN, Pa. Superintendent says municipal electric plants would be a success if politics could be kept away from them.

An official of

CONNEAUT, Ohio, says: When some saloon keeper, shoemaker or baker, who, by his affiliation with some organization, is elected to office and is allowed to manage an electric light plant, municipal ownership can hardly help being a failure. All the conditions are unfavorable, owing to the miserable political system of the country.

One of the officials of

GOODLAND, Ind., writes: DEAR SIR: This is a municipal lighting plant, and having to pass each year from bad hands to worse in the matter of trustees, the plant has never paid a dollar, but is running in debt constantly, as nearly every such plant is doing.

Yours truly.

DEAR SIR:

I have just taken charge of the plant here, and they hav'n't taken record of anything, run it just as they could. The engineer let things run down so that they were just about ready to shut down. I have been working at it day and night, got it so it runs very well now.

Yours truly.

DEAR SIR:

The mayor and all councilmen, city clerk and all citizens of the city try to run the plant. The water works and electric lights are run together. As the mayor and committee, with the assistance of a leather-headed clerk, all dictate what shall be done and where supplies shall be bought, I, therefore, have no report to make. With eight years' experience, I would advise all towns to hire their lights, which is by far the cheapest. I am not in favor of any city or town owning an electric light plant.

Yours truly.

CHARLOTTE, N. Y., has a municipal plant. George W. Ruggles, ex-president of the village, and a trustee for many years, says: "Municipal affairs here are in a terrible condition. The water works and electric light plants have been terribly mismanaged by village officials. I do not think the water system will be a success. We will not get any water from it. If we do, the supply will be very scant, and will be polluted by drainage from Greenleaf's farm barn-yards and outhouses, and the filth from the power house. Even if enough water should run into the receiving pipes, it would be contaminated by the sewage carried down the river from the city of Rochester. The substance of the whole matter is that we have expended more than $75,000 for village improvements, electric light, water works and sewer. We have a sewer, which is of no use without water works. We have no water, and are not likely to get any, and we have a few feeble electric lights. Last night, one of the brick arches under the boiler in the power house, for the second time, caved in, and nearly all the town was in darkness."

MUNICIPAL MANAGEMENT.

NEWARK, Ohio, has a plant, and at a meeting of the city council the president said: "They were having the worst service in the history of the plant. Several men were employed therein whose habits were so bad that for several days following each pay-day they were incapacitated for good performance of their duties. Many lamps throughout the city gave no light, because they were carelessly or improperly handled, and the time was not far distant when the city must incur a heavy expense to put the plant in shape." The *Newark, Ohio, American* says: "If the city authorities have in view the utter and complete destruction of our electric light plant, they are certainly pursuing the right course to accomplish that end."

WYANDOTTE, Mich. At a council meeting, charges were freely made against members of the board and the employes of the lighting plant. The mayor stated: "That accidents had occurred to the public lighting plant of the city in the last few months, and charges had been made by numerous citizens as to extravagance, incompetence and flagrant neglect on the part of employes. These had become so frequent that he had hardly been able to attend to business on account of such complaints. Also, the operation of the plant was becoming more and more costly each month."

ONAWA, Iowa, has a municipal plant, and for the past eight years the service has been very poor, resulting in many business men putting in plants of their own. The council claims that the management is to blame, and the management say the council interferes with the business, and so it goes. No head, and a lot of politicians running the business, and the tax payers paying for the loss sustained.

GRAND HAVEN, Mich. The city has been operating its electric light plant under the control of the board of public works, subject to the approval of the council. The board and council have quarreled over the city electrician, who has resigned. Another was elected. The board accuses the council of desiring to put men in charge of the electric light plant who are related to certain aldermen. The council accuse the board of trying to create liability without reference to the council, and have instructed the city treasurer to pay no bills not approved by the council. Meantime, the spring elections are anticipated, and merry times are promised.

FACTS DISCLOSED BY CITY OFFICIALS.

The following extract from the report of the chairman of the electric lighting committee of the city of Memphis, Tenn., who were negotiating and made a contract with the local company for 35 years, discloses some pertinent truths regarding municipal ownership:

In pursuing my investigations concerning this subject, I did not overlook cities owning electrical plants, on the other hand I did my utmost to obtain from such cities full and true reports relative to the actual cost of both arc and incandescent lighting, some of them replied, but the majority failed to furnish me with the desired information.

Those who did favor me, I regret to say, did so with reports that, upon outside investigation and from expert testimony, I find are totally unreliable, failing to give the true costs, merely publishing what I would term "political" figures.

For instance, the last published cost of an arc light in Allegheny, Pa., was $47.35 per annum, which was really the cash cost, making no allowance for interest, depreciation, taxes lost, or water consumed. However, in their annual report of bureau of lighting of 1900, they tell the public that, after allowing four per cent interest, five per cent depreciation, and a certain amount for taxes, their arc lights cost them $71.17, which is in itself, according to other statistics, too low. They give their depreciation at five per cent., or $12.04 per arc lamp, when, as a matter of fact, and upon investigations made by a committee appointed by congress and ten different cities, the actual depreciation should be ten per cent., or, instead of charging $12.04 per lamp, the city of Allegheny should charge $24.08, and publish its cost per arc lamp per annum at $83.21. Even this figure is disputed, experts claiming it too low.

The city of Chicago reports its cost per arc lamp per annum at $55.93, and admits no interest is charged on plant.

It might as well admit several other things which it does not, for the management of this concern has been anything but creditable to the city of Chicago, and the facts in the case are that when the lights are charged properly, and without any subterfuge being resorted to, the cost will be seen to be nearer $150 per annum per light than what is published.

It is a very significant condition of affairs when a city publishes $55.93 per arc light, then immediately after lets a contract for over 500 lights at $103, under the excuse that they do it rather than increase their present plant. It seems to me that, if they can produce lights as cheap

as claimed, they would certainly build a new or extend the old plant, when they can save $47.07 per arc lamp per year.

The city of Detroit owns its own plant, and is considered the best lighted city in America, and, from accounts, a very dearly lighted one. In various publications I find their cost given at $46.46 per arc lamp per annum, when they admit in their own report that, allowing only a three per cent depreciation, their arc lamps actually cost them $75.56 per annum. With proper charge for depreciation of ten per cent, etc., it will be found that Detroit lights actually cost them $102.36 per annum, taking the figures of experts.

The few other municipal plants that I could learn anything about ran their electric plants in connection with other municipal plants, and were either unable to furnish me with information desired or were unwilling to do so. Some few ran them in connection with water works, and hardly knew themselves what it cost them. From various publications I find quite a number of municipal plants in different cities conducted on the lines already referred to, and their lights costing them, in each instance, except where operated by water power or located in a much smaller city than ours, if anything, more than we pay at present for our arc lights.

MUNICIPAL OWNERSHIP PREVENTS IMPROVEMENTS.

An essay upon municipal ownership, by Wm. A. Lynch of Ohio, is so pertinent, and treats the subject so ably and thoroughly, that we quote portions of the article.

IS THERE A NEED OF CHANGE OF SYSTEM?

The discussions to-day range largely around the matters of public light works and street railways.

By far the major of these are owned by private companies, under legal restrictions of state and municipal control. May it not be well to inquire for a moment into the manner in which these companies have performed their duties, say, for the last twenty years? Will anyone deny that in that period the public lighting service has been vastly improved in character, and for each dollar paid the public receives vastly more in return than in 1880? Has any public service been better rendered, or more greatly improved, than that of public lighting in the period referred to?

And how is it as to street railways? In the short space of twelve years or so a complete revolution has been affected in our street railway transportation. At enormous cost, with prodigious energy and large

sacrifice, the old horse car street railway system has passed away and the new, the bright, the efficient electric system has taken its place.

It should not be forgotten that these vast improvements in lighting and transportation have been effected by private enterprise and private capital, working through private corporations.

The electric railway has cheapened the cost of service equally with the electric light, for while the nickel still remains the standard charge, yet by the lengthening of the lines, pushing them out into the suburbs, consolidating them, transferring from line to line, a lengthened ride, a quicker one, and a vastly pleasanter one, has been offered to the public without increase of fare.

In less than a quarter of a century a great revolution has been wrought. Great problems have been attacked, immense difficulties have been overcome and large successes achieved. I doubt if in the history of the world greater improvements of a practical kind have been worked out and accomplished, in so short a time, as we have seen in this country in respect to the public improvements to which I have referred. I desire to say now, with all possible seriousness and emphasis, that these improvements have been due to the fact, above all others, that these public services have been intrusted to private enterprise, working their private capital, and that under no other system could they have been brought about.

I think this is a point worthy of more careful thought. Suppose that the system which is now strenuously proposed, viz., the municipal ownership and control of these services had been established fifty years ago, and all the gas works, street railways and the like, had been owned by the cities and towns. What would have been the fate of the electric light, and where, to-day, would be the electric railway?

What made the electric light possible? When the first dynamo was produced, about 1866, affording the first means which had been developed for the cheap generation of electricity, eager minds turned at once to apply it to the generation of light and power for practical purposes. The thought was simple enough, the thing was a world of difficulties. Years of experiment in the field of actual use were necessary to bring success. The enterprise of private companies, acting upon competitive lines, furnished the field. Gas-producing interests stood solidly intrenched against the newcomer, but being virtually all in the hands of private capital, other capital took up the cause of the electric light, introduced it, worked with it, improved it and made it a success, and then pushed it with an aggressive earnestness without parallel in the history of business enterprise. What would have been the result, what chance would the electric light have had of introduction, experiment, development or success, if all the gas works of the country at that time had been owned by the municipalities? Competition would have been impossible. The entering wedge could not have been inserted, much less driven home. There would have been no inducement to taxpayers to have taken up the new bantling, and fought its battles for it against their own interests.

The city of Wheeling is referred to as perhaps the most marked example of successful municipal management of gasworks. Cheap and abundant coal near at hand and a well-selected board of trustees resulted in producing cheap gas. When the electric light knocked at its portals, it received no recognition. Wheeling did not have an electric light on its streets until all other towns in the United States of two thousand population, and many below that size, had their streets well lighted by the electric light. The city's large investment in its gas plant was sufficient argument against the admission of a competitor, and when some of its enterprising citizens built a small incandescent plant for private lighting, and started to make their way from block to block, they at first found it necessary to cross a street by drawing the wires through a pipe laid for the ostensible purpose of conveying water. Had all the cities owned their gas works, had the system of municipal ownership generally prevailed, it is safe to say that the immense improvement made in street lighting by the electric light would not have come in our time.

The indisposition of municipal authorities toward the prompt introduction of large improvements would have manifested itself in respect to street railways if they had been owned by the municipalities instead of private companies. Has anyone stopped to consider the enormous increase of investment which the change from the horse railway to the electric railway has called for? Would the cities have managed the numberless experiments, overcome the enormous difficulties and carefully, patiently worked out problems involved in this change?

HOW ABOUT THE FUTURE?

But it may be said, fortunately for us, the cities generally did not own the gas works or the railroads—the field was open for private capital to accomplish these results, but now that they have been accomplished, it is time for the city to enter the field and reap the harvest. We will now permit the city to build its light plant and enter into competition with the private company which has helped to make the electric light possible. If it is in our way we will destroy it, by furnishing the light at a diminished price, for we have an inexaustible fund upon which to draw, viz., the resources of the taxpayer, which the company does not possess. The company, therefore, must submit to be ruined, or turn over to the city its plant at a price which will represent the cost of reproduction, without allowance for the value of its franchise, its earning power or its good will, to say nothing of compensation for its sacrifices and losses made in the earlier portion of its history.

If this position is just, is it safe? Is it prudent to assume that there are to be no improvements in the future? All improvements in the past have been made at the expense of the private capital which had been invested before the introduction of the improvement. Has the inventive faculty of man exhausted itself? Is the electric light of to-day the end of improvement? If the municipalities of Ohio now build up, at large expense, electric lighting plants on the most approved lines of the pres-

ent, have we any assurance that they may not in the future be wiped out, or be made vastly less valuable by the inventions and improvements of the future?

ANOTHER ASPECT OF FUTURE IMPROVEMENT.

I have been pointing out that under the plan of municipal ownership, the municipal investment must run the risk of new improvements in plant or process—but there is another more important aspect in this question of future improvements. The public want the improvements—they get the benefit of them; it gives them a better light, a better service. With all the instrumentalities of generating light, transporting people and performing the other public services in the hands of the municipality, the introduction of improvements will be discouraged. To-day it is encouraged by the reason of the competition offered by those who are serving the public or are desirous of serving it. Take light again, for instance. When the electric light threatened to overwhelm gas investments with destruction, new processes in gasmaking were introduced which cheapened the gas, diminished the price to the consumer, and sustained the gas companies. And now, with the introduction of the Welsbach and other improved burners, gas is closely pressing the electric light; the price of both to the consumer is falling and the service of each improved, and within the past year both these lights are meeting sharp competition from the incandescent vapor lights of various kinds. But with all the light works in the hands of the municipalities, the motive for this constant struggle for improvement, this competition for public favor and patronage would be wholly destroyed.

THE QUESTION OF COST.

If the cities of Ohio generally enter upon the plan of owning their own lighting plants and operating them, the works will not be generally as well managed, and the cost to the consumer and taxpayer united will not be as small as though that service were left with private companies, under proper public regulations. This, to my mind, covers the whole question of cost. It is useless to cite isolated cases of a city here or there that has been fortunate enough in its management for a year or so to enable it to produce a cheap electric light. That all goes for nothing. What would the system of municipal ownership as a system result in, if generally introduced? Judge from the management of municipal affairs in other departments. There could be but one result; it would be more costly in the long run, taking a term of years together.

ILL EFFECTS OF CHANGES OF MANAGEMENT.

If lighting plants and street railways were generally owned by the cities, a serious drawback would be felt in frequent changes of management that would likely follow. These plants are much more complicated, employ more labor, require more technical skill than water works, and call for consistent plans patiently worked out to give them any show of success.

When we consider the rights of the men who operate these works, another question arises. Private companies make it a special point to retain the services of competent men as long as they faithfully perform their duties. Under municipal ownership they might find their tenure of place very uncertain as the spring election approaches, and all the evils of the spoils system, with its hardships and injustice, might be apprehended. It certainly would be a most unsatisfactory system of employment if the places of the men depended upon the result of an election, as would undoubtedly be the case under a general system of municipal ownership.

EFFECTS UPON OUR POLITICAL INSTITUTIONS.

Every patriotic citizen should feel that there are considerations deeper than those springing from dollars and cents. Every important change proposed in our public affairs must be challenged as to its probable effect upon the public welfare. It seems to be generally conceded that the crying evil of municipal management, especially in our larger cities, is bossism. Bossism feeds upon patronage. Municipal ownership carried to the full would enormously increase patronage. Would it not increase in equal degree the opportunities and power of the boss? I cannot say, as in my little city we have no bosses. It is claimed that municipal ownership would purify our politics and destroy the power of the political boss. It is said that the public conscience would be quickened and the enlightened attention of the citizens would be turned upon these matters, and that an exalted civil service will be established for the selection and employment of all public servants.

Past experience has not largely justified this claim. If the people of our large cities are willing to leave the immense concerns of the municipality to the bosses, and to bear the heavy burdens of constantly increasing taxation, with but spasmodic protests, is it likely that the addition of a lighting plant would work regeneration? Philadelphia's ownership of its gasworks did not seem to have that effect.

In the present state of the development of the race we must regard these sounding claims of the municipal reformer as decidedly chimerical. A reform which depends for success upon a material change in human nature has little to recommend it. Practical minds, who have had something to do with affairs, are disposed to judge of the future somewhat from the experience of the past.

THE BASIS OF MUNICIPAL OWNERSHIP.

The *Electrical Review* says:

The whole matter seems, in a way, too simple for elaborate discussion. The municipality has no right to tax its citizens save for their own benefit. It is conceded by all people that the maintenance of such institutions as the necessary courts of justice, the machinery of administration, the protection of life and property by police and fire departments, the maintenance of sanitary conditions, etc., are things which all citizens are directly and vitally interested and for which it is proper that every person living within the scope of the municipal government should be required to pay his proportionate part. This elementary principle of justice can not, however, be made to include those services which supply only a part of the citizens and not all. For example, the distribution of water, which is a commodity needed by every person, as well as by the community at large for the protection against fire and sanitary purposes, is fitly within the province of the municipality. The distribution of gas or electricity for lighting is not an essential, except in so far as it relates to lighting streets and public places. If a municipality undertakes to supply the consumers with electric light it enters into one or the other of three things, which are easily proved to be inequitable: *If the plant is operated at a loss, the taxpayers as a body must make up the deficit for the benefit of the individuals who use light. If it is operated at a profit, the individuals who use light must pay the profit to the relief of the body of taxpayers, who would otherwise be called upon to provide the increased income. If it is run at neither a profit nor a loss, then the municipal government is gratuitously undertaking the burden and responsibility of a business which is not profitable to it and which, by extinguishing the opportunity for competition, deprives its citizens of a certain just and natural right to buy in the cheapest market the commodity that they need.*

This, it seems, is the common sense of the municipal ownership situation. It is of interest to observe the change in opinion which is gradually coming over the public in Great Britain, where for years the municipal operation of such public services has obtained. While these have been admirably conducted from the point of view of economical administration and upright and honest management, they have failed to satisfy the public, and there is a constantly increasing demand for the chartering of private concerns to engage in the same lines of work. In other words, even in the oldest and most conservative community in which municipal ownership has had a fair trial, it has proved itself a failure. It seems strange, therefore, that such a thing should be advocated in this country, and doubtless the reason for its warm championship is often to be found in political aspirations on the part of self-seeking members of municipal governments.

AN ADVOCATE OF MUNICIPAL OWNERSHIP

Has furnished what he calls a list of the municipal plants in each state. An examination of this list discloses the fact that there are quite a large number of cities which he reports as having municipal plants who are furnished by private companies under contract, and, by his list, there are only 37 plants in the entire United States in places large enough so that the business to be obtained would properly support a private plant; all the others are in small cities or villages, where they were compelled to adopt municipal ownership in order to secure electric lights. The list shows that in 1892 there were 25 municipal plants established; in 1893, 15; in 1894, nine; in 1895, ten; in 1896, seven; and in 1898, only 5; thus showing a steady decrease; and indicate that when tax payers began to find out the fallacy of the statements of advocates of municipal ownership, and the true fact as to the cost of such plants, they refused to be drawn into the political trap.

WHAT DO INCANDESCENT LIGHTS COST?

The claim is often made that municipalities can produce incandescent lights for five cents per kilowatt, and that the profits at that price will pay all expenses of street lighting.

HUDSON, Mass., a town with a population of 5,308, installed, in 1897, an electric plant at an expense of $39,454. After embarking in this business they found they could not operate the plant without a loss, and the laws of that state prohibit a municipality conducting a business under these conditions. They therefore applied to the commissioners for permission to operate and levy a tax to cover the loss. The commissioners granted a hearing, and after reviewing the case and the testimony submitted, the board say: "It clearly appears that the cost for service is considerably in excess of the present prices of 20 cents per kilowatt hour. The board will give the matter favorable consideration, but the application of public funds raised by taxation to meet the deficit so created in the operating expenses of a municipal plant is repugnant to the idea of a fair and equal sharing in the benefits as well as the burdens of governments." The commissioners say that the testimony submitted shows that the cost of producing the lights is considerably in excess of 20 cents per kilowatt.

"OUT OF THE FRYING PAN INTO THE FIRE."

CHICOPEE, Mass. The following statement, made by the mayor of Chicopee, Mass., who favored municipal ownership, is like reports from many other cities, who, when they first enter upon the experiment, are very sanguine: "So far as municipal electric street lighting is concerned, for the city of Chicopee, it is a most decided success. When the city was under contract with the electric lighting company, the price paid per arc light, moonlight schedule until 1 A. M., was $75 per light. Judging from the year's experience of the city in doing its own street lighting, I can see no business reason why the city cannot produce as good lights at as small a cost as any private corporation." The mayor says the lights, when furnished by a private company, cost $75 per lamp per year. The Gas and Electric Light Commissioners of Massachusetts report that the cost of a 1,200 candle power arc light, furnished by the municipal plant, is $109.74 per lamp per year, burned 8.7 hours per night 28.8 nights per month.

GRAND RAPIDS, Mich., was paying $97 per light for a 2,000 candle power lamp burned every night all night. There were certain politicians who thought there was a chance for them to ride into office if they shouted for municipal ownership. They sent a delegation to Detroit, who reported cost of producing lights in that city. The private company offered to furnish the lights for the same price it cost the municipal plant in Detroit to produce them. They were not satisfied with this, and finally voted in April, 1897, for municipal ownership, and appropriated $150,000, selling bonds amounting to $125,000. A large number of tax payers remonstrated and signed petitions, but, as usual, the non-taxpaying element voted to adopt the plan. The business has been a bungle from the start, so much so that even the local papers say the additional $40,000 saddled upon the tax payers for the city lighting was not the first mistake. Good judges in that city claim that it will cost over $200,000 to complete the plant. They made a contract for buildings with a man who, the mayor says, "he would not employ to do work for him under any consideration"; yet the board employed such a man for this work, and the foundations were constructed. After they were completed and accepted by the board, and paid for, it was found that the walls were unsafe, and the city employed an expert to make an examination, who said they were not properly bound, and the cement used was worthless; he also stated that more than half of the entire walls would have to be rebuilt. They then made another contract to rebuild the walls at the taxpayers' expense. The wire run through the streets proved to be worthless, and would not support its own weight, while the expert they called stated that the loss on such wire would be 50 per cent.

They have one law suit already upon their hands over this plant, and a prospect for several more. This whole business was entered upon after the private company had offered to furnish the lights at the same price as it cost in the municipal plant at Detroit.

MUNICIPAL OWNERSHIP IN SANTA ROSA, CAL.

There has been so much said regarding cities being able to purchase plants at a much lower rate than private companies, that we copy the following report by Hon. Thos. V. Bakewell, of the San Francisco bar, which shows how such purchases are made by municipalities:

It is not the purpose of the writer to enter upon an extended discussion of the general subject of municipal ownership. Enough has been already said and written upon both sides of this question by persons better qualified to discuss the subject than the writer. Nevertheless, if any facts can be brought to the attention of the public, which will bear upon the practical working of the system in a case in which the experiment has been tried, it will certainly be profitable to consider them. The question in which we are most vitally interested is its applicability to our own times and conditions, and, if we are wise, we will not fail to profit by the experience of others. Municipal ownership is too costly an experiment to be engaged in, if it has already proved futile.

It is my purpose to call attention to a certain notable instance in which it has been attempted, in our own state, and not far distant from our own city, to put the theory of municipal ownership into practice, in connection with the water supply of a city. I refer to the public water works of the city of Santa Rosa. As it has been asserted that municipal ownership is especially suited to small cities and towns, it may be well to note that the city of Santa Rosa is of this class, its population amounting at the last census to 5,220.

The facts stated herein are taken from the findings and judgment of the court in the case of Mock v. The City of Santa Rosa, as shown in the transcript on appeal to the supreme court of California. So far as practicable and consistent with brevity, we have made use of the language of the judge in the findings. The reliability of these facts is vouched for by the integrity and ability of the judge who tried the case, William R. Daingerfield of San Francisco. Also, it may be safely assumed that the findings were fully justified by the evidence in the case at the trial, as

there was no appeal taken on that ground. The supreme court affirmed Judge Daingerfield's decision.

The attempt to construct a system of public water works in the city of Santa Rosa has proved an absolute failure. The city council, having taken the necessary preliminary steps required by the statute of 1889 as amended, ordered a special election to be held on March 7th, 1893, to vote on the question of the issuance by the city of bonds amounting to $165,000, to pay for a system of public water works. The bonds were to bear interest at four per cent, payable annually at a place to be fixed therein by the council. The necessary notices were given, and the voters of the city, on the day named, decided in favor of the bonds by a two-thirds majority. One C. Monjeau had previously, at the order of the council, prepared plans and specifications, together with two estimates of costs, one amounting to $165,000, and one amounting to $199,500, and these were placed on file with the city clerk on March 23, 1893. On September 8th, 1894, the council ordered a notice to contractors to be published, asking for bids on the construction of the water works. This notice specified that the works were to be constructed according to the specifications of Monjeau on file with the clerk; that bids must be accompanied by specifications, and also by a bond in six per cent of the amount of the bids, binding the successful bidder to enter into a contract with the city for the construction of the works, and further binding him to furnish a bond in 75 per cent of the amount of the bid to secure performance of the contract; and the bids were to be opened on September 24th, 1894.

At some time prior to September 22d, Robert Effey and W. T. Garratt & Co. entered into an agreement whereby it was agreed that, in case Effey got the contract, Garratt & Co. would build the works for him for an amount less than $120,000, and would furnish a bond for $120,000 to do the work, and that they would also offer a bid themselves. Accordingly, Garrett & Co. delivered to Effey on September 22d, 1894, a bid purporting to be executed by them, offering to do the work according to the specifications legally adopted. Effey filled in the amount, $164,500, and the clause "the city to furnish the water rights, land, and rights of way," wrote upon the envelope "city of Santa Rosa, bids for construction," and delivered the bid to the city clerk, on September 24th. On the same day Effey filed a bid on his own behalf offering to do the work "according to plans and specifications herewith submitted" for $161,000. This bid was accompanied by a check for $10,000. The court found that the script portions of these two bids, and also the writing upon the envelopes were manifestly the same handwriting, either that of Effey or of one Pitchford, as his agent in the premises.

It is not the purpose of this writer to detract from the reputations of the gentlemen concerned in this matter, and yet this state of affairs must be ascribed either to gross incompetence, or to collusion, on the part of the city council. Their subsequent action would seem to point to the latter conclusion. Here were but two bids, both of them very exorbitant. The court finds that Effey knew that he could build the works, as called

for by the notice, for very much less than $120,000. Nevertheless, he put in a bid to build much less complete works for $161,000, and, in order to make his own bid seem moderate, put in another bid, in the name of Garrett & Co., for $164,500. This last bid did not even comply with the formal requisites of the notice, not being accompanied by specifications, and the two bids were, as to the script portions, manifestly in the same handwriting. If the common council of a city can be deceived by as patent a device as this, it would seem better to endeavor to limit, rather than to extend, the amount of business affairs placed in their hands. Furthermore, they awarded the contract in plain contravention of law, it being a first principle of law that such contracts shall be awarded only after the public has had a lawful opportunity to bid upon the contract awarded.

This was the agreement which was eventually carried out. Effey's control over the mayor and council seems to have been absolute. They accepted his bid for the construction of the works, when it was the only one made which complied with the formal requisite of being accompanied by specifications; when it was exorbitant; when it was manifestly collusive with the only other offer received, and when it was void, on account of variance from the requirements called for by their former steps; they attempted to issue bonds more valuable than they had the power of issuing, with the purpose of turning them over to him; and, when they found this impossible, they issued bonds knowing that they could not dispose of them legally, and with the purpose of turning them over to Effey, in contravention of law. The mayor and council then devoted themselves to carrying out this agreement, and to so changing the plans as to enable Effey to make a greater profit.

About August 15th, 1895, the mayor and council ordered the treasurer to return to Effey the check for $10,000 which accompanied his bid, and no other check was ever given by Effey on his bid.

On September 28th, 1895, the mayor, E. F. Woodward, Robert Effey, J. W. Goodwin and Paul B. Perkins, met together in San Francisco, and the following agreement was made: Effey was to be absolved from furnishing any bonds to the city for faithful performance of the contract about to be let to him; Effey was to thereafter assign the contract to Perkins in pursuance of an agreement between Effey and Perkins that the latter would construct the work for a sum not exceeding $120,000, and Perkins was to execute to the city a bond in the sum of $40,000 to construct the works according to the Monjeau plan. On the evening of the same day, at nine o'clock, Effey, Perkins, Goodwin, the city clerk, the city treasurer, the mayor and the common council met together in Santa Rosa. The council passed a resolution authorizing E. F. Woodward, the mayor, in behalf of the city of Santa Rosa, to enter into a contract with Effey for the construction of a system of water works in accordance with the Monjeau plans, and authorizing the city clerk to draw a warrant on the treasury for $161,000, payable to Effey, and directing the city clerk to deliver the same to Effey. The contract was signed by the mayor and Effey, and the treasury warrant was delivered to

Effey. Perkins gave a bond for $40,000 to construct the works. All the parties then ratified the agreements described above as having been made in San Francisco, on the same day, by the mayor, Effey, Perkins and Goodwin, and in effect consummated the original design to deliver the bonds to Effey as a payment in advance for the construction of the works. We do not purpose to encumber this article by a detailed account of the devices by which the parties concerned attempted to give color of law to this transaction. The court found that Effey never paid to the city of Santa Rosa, nor to the treasurer, any sum of money whatsoever for the bonds, as he was required to do by law. The court also found that the mayor and council, in taking these steps desired and intended, if it were legally possible, to ratify all voidable proceedings connected with the contract and water bonds, as to bind the municipality, so that complaining taxpayers could not successfully litigate these matters in the courts, and also intended and desired to head off and avoid any injunction or other judicial obstruction, and further that they believed that they were acting for the best interests of the municipality in so doing, notwithstanding the fact that they also knew not only the voidness of the Effey bill, but that the superior court had so declared, and notwithstanding the fact that they believed that their course, in refusing to treat the Effey bill as void, would prevent litigation and expedite the construction of the water works, by summarily depriving complaining taxpayers of redress from the courts. But the court concluded that, despite of this intention, their acts in endeavoring to estop the municipality in the premises, after full knowledge of the voidness of Effey's bid, were fraudulent and void as against the city and its taxpayers.

As to the claimed agreement that Perkins would construct the works in accordance with the Monjeau plans and specifications, the court concluded that the voidness of his bid and of his contract was not cured thereby, for the reason that his estimates of cost whereon he made his bid were founded on his own offer and not on the Monjeau plans. This agreement was evidently made for the purpose of curing the defect which arose from the discrepancy between the terms of Effey's bid and the notice to contractors ; but no one except Effey ever had an opportunity to make an offer or bid on the work, from October 4th, 1894, when Effey's bid was accepted by the council, to September 28th, 1895, when it was made to comply with the notice, nor was any notice ever given that the bonds would be paid instead of money, for the work, nor that the bond required to be given in three-fourths of the amount of the bid, to secure performance of the contract, would be waived. As a result of this Judge Daingerfield found that the bid accepted was at least $70,000 higher than would have been bid to construct the works according to the plans of Monjeau if the general public had been offered the same conditions as were offered Effey, or if there had been money in the treasury applicable to the payment of an accepted bid ; and responsible persons who examined the specifications on file, with a view to bidding on the

contract, were deterred from so doing, by reason of these facts and by reason of threatened litigation.

The mayor and council now commenced a systematic course of so altering the Monjeau plans as to wholly change the nature of the contract. On December 10th, 1895, they passed a resolution changing the plans so as to call for the erection of a pumping station according to plans of Perkins filed with the clerk on that day, instead of in accordance with those of Monjeau; for the building of a reservoir, wholly different in character and much less expensive than that called for by the Monjeau plans; for pumps according to Perkins' own plans, instead of Monjeau's; for boilers of a wholly different character from those called for by the Monjeau plans, and for Perkins' hydrants. On December 23d, 1895, the council passed a resolution providing for the erection of a cottage for the engineer at the pumping-station, according to plans of Perkins filed at the time.

Absolutely no consideration passed to the city for making these changes. It had been provided in the specifications of Monjeau that, in case of any change in the plans, the price of the work as changed should be fixed by arbitration between the contractor and the council, but the price of the changes above referred to was never so fixed. This was simply a voluntary relinquishing, by the city, of certain rights. The loss to the city by these alone amounted to $9,000.

Furthermore, the works were so poorly constructed that their actual worth to the city was less than the cost of constructing them. For example, by reason of faulty construction, one of the pumps and boilers, constituting one-half of the plant at the pumping station, was unable to draw water from the wells, and, on that account, had to be removed from the pumping station and re-erected at the wells, at a cost to the city of $4,619.93. Again, the reservoir was so unskillfully constructed that, upon the first day of its test, it cracked and leaked when filled, and the water escaped from the reservoir.

The council further displayed its generosity towards Effey by allowing bills against the city for alleged extras supplied to the city, amounting to $1,286, all of which, except $114, was for work and materials which were called for, not only by his contract to construct the works in accordance with the Monjeau plans, but also were called for by the terms of the resolutions changing these plans.

On January 2d, 1896, during the pendency of the suit of Mock v. City of Santa Rosa, which was brought for the purpose of setting aside Effey's contract and recovering damages against the persons concerned in the transactions which we have described, the mayor and council passed a resolution accepting the water works constructed by Perkins and ordering the city marshal to take possession of them on behalf of the city, Perkins assenting in writing. This action was taken by the mayor and council in the belief that the construction of the works had been practically finished, and that their action would in law have the effect of preventing successful litigation against the validity of the contract, including the action of Mock v. City of Santa Rosa, and rendering

nugatory any judgment in that action, or in any contemplated litigation. It was simply another fraudulent and void attempt to estop the city from claiming its rights in the premises.

On January 2d, 1896, when the city accepted and took possession of the public works and offered to make connections and supply water to the inhabitants, there were 1,050 connections which had been made with other water works in the city. Up to December 11th, 1896, the time of the trial of the action of Mock v. City of Santa Rosa, and before which time the works had been entirely completed, the greatest number of connections which had been made with the public works was 650 in all, and the works were not able to furnish even that number of connections with water during the summer months.

Besides this, the city itself had to purchase, as a matter of reasonable prudence, water from other water works for municipal uses, such as sprinkling streets and flushing sewers, at an expense to the city, from February to December, 1896, of $1,184.81.

The relation of any legislative body to the government for which it legislates, whether municipal or state, is, so far as administering its finances is concerned, that of a trustee. It is bound to guard the interests of its constituent body most jealously. A man who is acting entirely on his own behalf may be generous or exacting, as it may suit his inclination; but a trustee, in dealing with persons whose interests are necessarily opposed to those of his beneficary, is bound to deal with them at arm's length. That which is an act of charity, when the means of doing it are taken from one's own pocket, is plain robbery when the means are taken from trust funds. Therefore anything approaching collusion on the part of the common council of a city with those with whom the city is contracting, either in the disposal of the city's bonds or in awarding of a contract for public work, is bound to prove disastrous to the city. In the case which we have been considering the mayor and city council seem to have been entirely without any volition in the matter except to follow the nod and beck of Effey and Perkins. They enacted, repealed and re-enacted at the behest of these men. It matters not to what reason we may ascribe this, whether to dishonesty on the part of the council or to inefficiency on their part, or to craftiness on the part of the persons with whom they were dealing, in deceiving the council as to the city's interests. The result was that the city of Santa Rosa paid $165,701.25 in bonds, besides $1,286 in cash, for a system of water works which probably could have been built for $79,000, and were worth much less on account of faulty construction. Even then about one-half of the city was compelled to purchase its water supply from other water works.

Other cities, when contemplating the question of municipal ownership, whether it be of water works, of railroads or of gas works, should first look carefully into the question to ascertain whether there is reason to suppose that their experience will be different. The inefficiency of our municipal governments is widely admitted. Some have accounted for it by our form of government. Political theorists generally admit that the great drawback in the republican form of government is its

inaptitude for administrative affairs. The ability of our municipal governments successfully to undertake the ownership of water works is extremely doubtful, and until it has been demonstrated it would be well for other cities to keep Santa Rosa's experience well in mind.

MUNICIPAL PLANT RECORDS.

In the reports from municipal plants, the actual interest paid by each city is given. Depreciation is calculated in every case at five per cent. The best authorities consider this too low, but, as the Massachusetts bill made that rate, it has been used in this work.

Operating expenses are precisely as shown by the city records, and no charge is made for a sinking fund if bonds were not issued. All bonds are based upon 20 years, but the reports show that in many cases they will mature before that time expires.

The income from commercial lights and power are the amounts as shown by the official records of each city, also the number of street lights used, and their candle power.

AUSTIN, Texas. The risks a municipality incurs when they adopt municipal ownership is shown by the experience of Austin.

They invested $1,750,000 in an electric light and water works plant.

Contracts were made with the two street railways to furnish them with power from the city plant.

In a short time the water began to fail, and they had to shut off all lights and power, finally shutting down the entire plant.

This compelled one of the railroads to haul their cars with mules, while the other rented locomotives from the Houston and Texas railroad.

The city was left in darkness for weeks.

As a climax to the municipal enterprise, and while the city was on the verge of bankruptcy, caused by municipal ownership, the dam, which was built to furnish power and lights for the city gave way, and swept the electric light plant and water works away, utterly wrecking and destroying the entire business, wiping out over one hundred buildings in the city, and leaving it in darkness, as well as destitute of water for fire or domestic use, and entailing a loss of over $3,000,000.

Now, the tax payers have to provide for the debt of $1,750,000

expended in establishing the municipal plant, and the interest upon same, as well as the immense damage caused by this failure of the dam, and the consequent loss to individuals, for which the city is liable; while they have nothing to show for all this expenditure or these liabilities; everything is wrecked.

Here we have a practical illustration of the workings of municipal ownership, and the risks a municipality assumes when they engage in a business enterprise.

The advocates of the system said, adopt and save a mint of money, experience discloses an enormous loss.

W. D. Hornaday has described the situation so fully, that we quote from his letter:

"Brief mention has been made in the press dispatches of the leaks in the great dam across the Colorado river at Austin, Texas, and the almost complete suspension of the operation of the municipal electric light and power plant, on account of the limited supply of water with which to run the turbines. This serious condition of affairs will probably continue for an indefinite period, as there seems to be no way of stopping these leaks, which are gradually draining the great lake formed by the dam of its water. The people of Austin have come face to face with the problem of municipal ownership, and it is hard to foretell what the solution will be.

"The project of constructing a gigantic dam across the Colorado river, at a point three miles west of Austin, had its inception in 1890, and, after considerable agitation, the proposition for the city to issue bonds to the amount of $1,400,000 to carry out the enterprise was voted upon and carried by a big majority, at a municipal election held on May 5, 1891. These bonds were sold, and the work of constructing the dam began. It was found that $1,400,000 was not sufficient to complete the work, and in 1894 another issue of $200,000 was voted. In addition to the proceeds from the sale of these bonds, about $150,000 was used by the city in completing the dam and constructing the municipal water works plant and electric light and power house, making the total cost of the enterprise about $1,750,000. The $1,400,000 of bonds bear five per cent, and mature in 40 years; the $200,000 issue bears six per cent, and also mature in 40 years. Nearly all of these bonds are held in the east.

"Before the construction of the dam was undertaken, it was asserted by competent engineers that it would be impossible to prevent leakages, owing to the fact that all this section is of limestone formation, and sinkholes abound along the course of the Colorado river. Despite these warnings the great enterprise was carried out. While the work on the dam was still in progress, a large stream of water burst forth a short distance below it. Although it was thought to be a leak at the time, no effort to stop it was made. Since then other leaks have occurred, and it is claimed, by those who have conducted an investigation, that a big volume of water is pouring out from underneath the masonry work, near the center of the dam. During the period from August 14 to September 14, of the present year, the water in the lake, formed by the dam, fell ten

feet, and that this great fall was due to leaks is shown by the fact that the volume of flowing water in the river below the dam is greater than usual at this season of the year. In addition to these leaks, the city authorities with soon have to contend with the problem of cleaning out the lake. The water in the lake at the dam was originally 60 feet deep. Soundings show that there is now but 27 feet of water, sand and sediment from the great watershed above having filled up the bed of the lake to a depth of 33 feet. No provision was made in the construction of the dam for cleaning out the bed of the lake.

"There are three penstocks at the dam. When the water in the lake reaches the crest of the dam the head of water at the penstocks is 16 feet. The city uses but one of these penstocks. It is estimated that the average flow of the river is equivalent to 1,000 horse power, without making any allowance for evaporation or leakage. It was estimated that the storage of the waters of the river, by the construction of the dam, would afford not less than 14,000 horse power, which would give a surplus of 12,500 horse power, the amount required by the city being only 1,500. It was believed by the promoters of the project that there would be no difficulty in disposing of this surplus power to manufacturing concerns, and that the city would derive a handsome revenue from that source, but there has been no realization of these expectations, not a single manufacturing enterprise having been established here by reason of the water power advantages. The amount of water power now used by the city at the dam is from 300 to 500 horse power.

"The gross receipts derived by the city from the water works and electric light and power plant, when it is in full operation, are about $60,000 per year. The aggregate expenses of operating the plant are about $174,000 per year, including the $114,000 interest upon the bonded debt. Previous to establishing its own water works and electric light and power plant, the city paid a private company here $18,000 per annum for better service than is now costing the tax payers $174,000 per annum. The present city tax rate is 2.30½ on $100. Before the building of the dam and municipal water works and electric light and power plant, the tax rate was only 90 cents on $100, sufficient revenue being derived from this rate of taxation to pay the private water and light plant for their hydrant service, street lights, etc., and also interest on $125,000 of bonds which the city had out at the rate of ten per cent interest per annum.

"The present city valuation is about $11,000,000, which amount is much above the real value. Before the establishment of this gigantic municipal enterprise, the property valuation of the city was $6,000,000, and with the tax rate of 90 cents there was derived sufficient revenue to meet every obligation. Store rooms in the business centre of the city that formerly rented for $100 per month now rent for $25 to $35 per month. If the estimate of $6,000,000 of real valuation for the city is correct, and with a bonded debt of $1,600,000, the city of Austin has been given a credit of over 20 per cent, when all statistics show that no corporation is entitled to over five per cent of its assessed valuation.

"The proposition is a hard one for the city authorities to deal with,

and they are coping with it the best they can under the circumstances. It has been fully demonstrated that the water power which should be afforded by the dam cannot be depended upon, and steps have been taken looking to the purchase and installation of an auxiliary steam plant to cost in the neighborhood of $75,000."

The *Electrical World* says:

The city council of Austin, Texas, has voted not to pay interest on its $1,327,000 five per cent city water and light bonds, due January 1, 1900. The city is thus forced to default in the payment of its quarterly interest. This measure is understood to mean that the council intends repudiating the issue.

Representatives of the eastern holders of the Austin water and light bonds are here investigating the financial condition of the city, and compiling data to be used in the preparation of suits to be filed by the bond holders in the federal court for the recovery of the defaulted interest and principal due them on the bonds. The action of the city council, in seeking to repudiate this bonded indebtedness of $1,500,000, is being severely criticised by the majority of tax payers of this city. The project of installing an auxiliary steam plant at the electric light and power station here has been abandoned, on account of the critical condition of affairs which now confronts the city.

The *Electrical Review* says:

THE AUSTIN DAM.

The unfortunate and fatal failure of one of the most pretentious municipal enterprises ever undertaken in the United States. The city of Austin, Tex., undertook to build this enormous hydraulic work, damming up the Colorado river and developing a power sufficient to operate the municipal water works, municipal electric light plant, municipal power plant for the street railway company, and municipal plant for the production of power for sale. The cost of the enterprise was somewhat more than one million dollars. For seven years it has been in operation and its destruction only calls attention to the fact that as an enterprise it was a distinct failure. Outstanding bonds for the construction of the dam, amounting to one million three hundred thousand dollars, are held by various investors, and upon these bonds the city has defaulted in payment of interest for two quarters. The city is still deeply in debt from its dam enterprise, and to-day is without light, without water, without street cars and almost without hope on account of the failure of its big plaything. There is little prospect of the dam being rebuilt and the outlook for the bondholders is not cheerful. While deeply sympathizing with the people of the unfortunate city in the catastrophe that has overwhelmed it and them, it is not unkind to say that they afford at present a spectacle of deep interest and great importance, which is urgently recommended to the studious attention of every advocate of municipal ownership of any sort.

City Government says:

AUSTIN'S EXPENSIVE "TIN WHISTLE."

The Texas flood is to be deplored, particularly in the loss of life. The calamity, however, calls national attention to the tragic ending of a colossal scheme of municipal ownership. The plan was to utilize the 14,000 horse power in supplying light and water to the city and sell the large balance of power to manufacturers who would be induced to locate in Austin.

The trained engineers and the best business talent of the city pointed out the impractical and impossible conditions surrounding the undertaking, but the politician saw, or thought he saw, his great opportunity, and pushed the plan along. Result: The prophecies were fulfilled, for, although nearly $2,000,000 were expended, nothing was realized from the outlay. Municipal ownership on business principles may be all right, but upon political foundations is sure to be wrong.

J. B. Boyd of Texas says:

To get a little nearer home with an illustration of the "Attitude of Municipal Corporations to the Public," we can dwell a moment over the gigantic municipal investment at Austin. While the writer was not a resident of your state during the "pioneer period" thereof, he distinctly remembers reading in the papers about the "coming Moses" which was to rescue Austin from the slough of despond and at one grand stroke place her on the topmost pinnale of fame. She has obtained the fame all right, but is practically bankrupt, or expects to be, according to statements appearing from time to time in the local papers. There is hardly room for doubting but what the monthly balance shows a red ink balance on the wrong side of the ledger of some eight thousand dollars, and that the tax rate has been increased over 150 per cent, but she HAS a municipal plant all right, and if she can possibly raise the necessary funds she is likely to increase her holdings in a supplementary investment designed to discount the annual rainfall. If successful in raising the proposed funds, she will have a little more municipal plant than she now possesses. As her line of credit has already been extended far beyond good financiering practice, it is not altogether apparent where the money is to come from. Texas bankers and financiers with whom the writer has conversed on the matter seem to feel that it is only a question of a short time ere the city of Austin will become bankrupt through this monumental example of the "Attitude of Municipal Corporations to the Public."

ATLANTIC HIGHLANDS, N. J., plant, $15,000; operating expenses, $4,900.75; interest at 5 per cent., $750; depreciation, $750; taxes and water rent, $150; insurance, $100; sinking fund to pay bonds, $750; making $7,400, less income from commercial lights, $2,293.56, and we have $5,106.44, cost of street lights, being $75 per lamp per year, burned 2,000 hours, costing .0375 per hour and furnishing 533 candle power per hour for one cent. The following statement has been printed widely in papers

advocating municipal ownership, and cited as an illustration of the success achieved by the system at Atlantic Highlands: "Including the payment of the interest on the issue of bonds, the total amount paid by the town for its street lighting has been $1,808.27. The streets are lighted with 68 arc lights, and the amount paid by the town for street lighting is only $26.50 per lamp, or a trifle less than one-third the price offered by the lowest private company."

It is plainly stated in this article that the total amount paid by the town was $1,808.27, while an examination of the treasurer's books shows that $750 was paid for interest on bonds, $867.25 for coal, $1,616.60 for labor and salaries charged to the electric department, making a total for these three items of $3,233.85, not including any of the other expenses of the plant, or depreciation, or sinking fund to pay bonds.

ATLANTIC, Iowa, plant, $40,000; coal, $1.50 per ton; operating expenses, $7,638.97; interest at 5 per cent, $2,000; depreciation, $2,000; taxes, insurance and water rent, $400; sinking fund to pay bonds, $1,250; making $13,288.97, less income, $7,924.49, and we have $5,364.48, cost of 12 2,000-candle power arc and 160 32-candle power incandescent street lights, equivalent to 47 arc lights burned 2,200 hours, costing .0518 per hour, and furnishing 386 candle power per hour for one cent.

ABINGTON, Va., plant, $12,500; coal, $3.00 per ton; operating expenses, $1,800; interest at 6 per cent, $750; depreciation, $625; taxes and insurance, $125; sinking fund to pay bonds, $625; making $3,925, less income, $2,300, and we have cost of street lights burned 4,000 hours, costing .027 per hour, and furnishing 592 candle power per hour for one cent.

AMES, Iowa, plant, $16,844; coal, $1.55 per ton; operating expenses, $7,006.70; interest at six per cent, $1,011.84; depreciation, $843.20; taxes and insurance, $168; making $9,129.74, less income, $6,400, and we have $2,729.74, cost of street lights burned 1,500 hours, costing .0836 per hour, and furnishing 239 candle power per hour for one cent.

ATKIN, Minn., plant, $10,000; operating expenses, $2,550; interest at six per cent, $600; depreciation, $500; taxes and insurance, $100; making $3,750, less income, $2,700, and we have $1,050, cost of street lights burned 2,000 hours, costing .035 per hour, and furnishing 342 candle power per hour for one cent.

ATHENS, Ala., plant, $6,000; coal, $2 per ton; operating expenses, $1,400; interest at five per cent, $300; depreciation, $300; taxes and insurance, $60; sinking fund to meet bonds, $300; a total of $2,360, deducting all income, $1,800, and we have $560, for street lights burned 1,200 hours, costing .0333 per hour, and furnishing 686 candle power per hour for one cent.

ANDERSON, Ind., plant, $75,000, and they use natural gas for fuel; operating expenses, $6,000; interest at six per cent, $4,500;

depreciation, $3,750; taxes and insurance, $750; making $15,000, less all income, $5,000, and we have $10,000, for street lights burned 2,000 hours, costing .0222 per hour, and furnishing 900 candle power per hour for one cent.

ALLEGHENY, Pa., plant, $265,000; coal, $1 per ton; operating expenses, $54,908; interest at four per cent, $10,600; depreciation, $13,250; water tax, $500; taxes lost on two-thirds cost of plant, $2,000; sinking fund to pay bonds, $5,000; making $86,258, cost of street lights burned 3,976 hours, costing .0197 per hour, and furnishing 1,010 candle power per hour for one cent. The superintendent from Allegheny, in a discussion at New Haven, stated that, "if New Haven was getting its lamps at $98.55 per year, when the adjustment of the account was made to correspond with the difference for local conditions, that the price in New Haven is less than the price of the municipal plant at Allegheny."

ADRIAN, Minn., plant, $13,000; operating expenses, $1,819; interest at five per cent, $650; depreciation, $650; taxes and insurance, $130; making $3,249, less income, $1,800, and we have $1,449, cost of street lights burned 1,500 hours, costing .0686 per hour, and furnishing 174 candle power per hour for one cent.

ARLINGTON, Minn., plant, $4,000; operating expenses, $1,200; interest at six per cent, $240; depreciation, $200; taxes and insurance, $40; making $1,680, less income, $1,250, and we have $430, cost of street lights burned 1,200 hours, costing .0895 per hour, and furnishing 134 candle power per hour for one cent.

AURORA, Ill., plant, $51,500; coal, $1.75 per ton; operating expenses, $10,306; interest at five per cent, $2,575; depreciation, $2,575; taxes and insurance, $510, making $15,966, cost of street lights, burned 2,500 hours, costing .031 per hour, and furnishing 645 candle power per hour for one cent.

ASHTABULA, Ohio, plant, $80,000; coal, $2.05 per ton; operating expenses, $15,000; interest at 4 per cent, $3,200; depreciation, $4,000; taxes and insurance, $800; sinking fund to pay bonds, $2,400; making $25,400, less income, $13,000, and we have $12,400, cost of street lights burned 2,000 hours, costing .0568 per hour, and furnishing 352 candle power per hour for one cent.

ALEXANDRIA, Va., plant $16,000; operating expenses, $5,000; interest at 5 per cent, $800; depreciation, $800; taxes and insurance, $160; making $6,760, cost of street lights burned 3,750 hours, costing .0195 per hour, and furnishing 769 candle power for one cent.

ALEXANDRIA, Minn., plant, $17,500; operating expenses, $2,457.09; interest at 6 per cent, $1,050; depreciation, $875; taxes and insurance, $175; making $4,557.09, less income, $2,694.06, and we have

$1,863.03, cost of street lights burned 1,500 hours, costing .0828 per hour, and furnishing 241 candle power per hour for one cent.

BELLVUE, Iowa, plant, costing $15,000, coal $3.50 per ton; operating expenses, $2,376; interest at 6 per cent, $900; depreciation, $750; taxes and insurance, $150; making $4,176, less income, $2,400, and we have $1,776, as cost of street lights burned 3,800 hours, costing .0212 per hour, and furnishing 566 candle power per hour for one cent.

BAY CITY, Mich., plant, $39,000, and coal $1.50 per ton; operating expenses, $9,538.72; interest at 4 per cent, $1,560; depreciation, $1,950; taxes and insurance, $200; total, $13,248 72, cost of street lights burned 2,000 hours, and costing .0261 per hour, and furnishing 766 candle power per hour for one cent.

The *Tribune* recently said:

"The manner in which the streets of Bay City are lighted (or rather not lighted) has ceased to be a subject of humorous mention and should be given some consideration by the common council. The city has an expensive lighting plant, but for at least one-third of the month the people who pay taxes for the support of public institutions do not realize that fact, especially if they have business which takes them upon the streets at night. It is time to call a halt and light the streets after the manner of modern, up-to-date cities."

BLOOMFIELD, Iowa, purchased an electric plant in 1891 for $14,000, in 1896 their dynamos failed, and had to be replaced with new ones at a cost of $5,000, making an outlay of $19,000. They report that they can duplicate the plant to-day for $9,000, making a depreciation of one-half of the investment. Their incandescent lights are burned 2,000 hours, costing $12.96 per year per lamp. All of the reports show that this plant has been a loosing venture.

BLOOMINGTON, Ill., plant, $125,000; coal, $1.95 per ton; operating expenses, $17,000; interest at four per cent, $5,000; depreciation, $6,250; taxes and insurance, $1,000; making $29,250, as cost of street lights burned 2,555 hours, costing .0366 per hour, and furnishing 540 candle power per hour for one cent.

BETHANY, Mo., plant, $25,000; coal, $3 per ton; operating expenses, $2,000; interest at four and one-half per cent, $1,112; depreciation, $1,250; taxes and insurance, $250; sinking fund to pay bonds, $950; making $5,562, less income, $2,500, and we have $3,062, cost of street lights burned 2,200 hours, costing .0397 per hour, and furnishing 302 candle power per hour for one cent.

BELMONT, Mass., plant, $16,000; cost per lamp per year, as shown by sworn statements made to the Gas and Electric Light Commissioners, was $121.11 for 1,200 candle power burned 1,478 hours, costing .0812 per

hour, and furnishing 147 candle power per hour for one cent. They also use 25 candle power incandescent on the streets, costing $30.28 per year, only burned 1,478 hours.

BRAINTREE, Mass., plant, $67,067 ; cost of a 1,200 candle power lamp per year, as made to the Gas and Electric Light Commissioners of Massachusetts, was $89.91, burned 2,300 hours, costing .039 per hour, and furnishing 307 candle power per hour for one cent. They use 25 incandescents on side streets, costing $22.48 per year, burned 2,300 hours.

BATAVIA, N. Y., plant, $27,538.91 ; coal $1.77 per ton ; operating expenses, $5,113.41 ; interest at four per cent, $1,101.55 ; depreciation, $1,376.94 ; taxes, $275 ; sinking fund to pay bonds, $750 ; making $8,616.90, cost of street lights burned 3,600 hours, costing .0213 per hour, and furnishing 938 candle power per hour for one cent. The salary of the engineer is charged to the water works. There has been charged to construction $5,738.91, but, as there are only nine more lamps in circuit, it is evident that most of this item should have gone to expense account. Two armatures were burned out during the year.

BANGOR, Me., plant, $40,000 ; water power, operating expenses, $6,500 ; interest at four per cent, $1,600 ; depreciation, $2,000 ; taxes and insurance, $400 ; making $10,500, cost of street lights burned 4,000 hours, costing .0152 per hour, and furnishing 789 candle power per hour for one cent.

The cost charged for plant does not include any part of the building, wheel, pit wheel, or gears and shafting, or for the water power or repairs on the dam.

BOWLING GREEN, Ky., plant, $18,000 ; coal, $1.28 per ton ; operating expenses, $3,980.23 ; interest at six per cent, $1,080 ; depreciation, $900 ; taxes and insurance, $180 ; making $6,140.23, cost of street lights burned 2,200 hours, costing .0387 per hour, and furnishing 516 candle power per hour for one cent. Upon an examination of the water works accounts, we find that the superintendent's and bookkeeper's salaries, stationery and interest, were charged to that department, and nothing to the light plant.

BLUE ISLAND, Ill., plant, $20,000 ; lights burned 1,875 hours, costing .0451 per hour, and furnishing 443 candle power per hour for one cent.

CARTHAGE, Ohio, plant, $15,000 ; coal, $2.00 per ton ; operating expenses, $2,500 ; interest at five per cent, $750 ; depreciation, $750 ; taxes and insurance, $150 ; making $4,150, cost of street lights burned 3,000 hours, costing .0288 per hour, and furnishing 694 candle power per hour for one cent.

CLYDE, Ohio, plant, $12,000 ; coal, $1.76 per ton ; operating expenses, $5,000 ; interest at six per cent, $720 ; depreciation, $600 ;

taxes and insurance, $120; sinking fund to pay bonds, $600; making $7,040, less income for incandescents, $2,500, and we have $4,540, as cost of street lights burned 1,500 hours, costing .057 per hour, and furnishing 350 candle power per hour for one cent

COLUMBUS, Ind., plant, $11,457; coal, $1.50 per ton; operating expenses, $3,493.05; interest at five per cent, $572.85; depreciation, $572.85; taxes and insurance, $114; making $4,752.75, cost of street lights burned 2,000 hours, costing .0334 per hour, and furnishing 598 candle power per hour for one cent.

CATAWISSA, Pa., plant, $10,000; coal, $1.00 per ton; operating expenses, $2,200; interest at five per cent, $500; depreciation, $500; taxes and insurance, $50; sinking fund to meet bonds, $600; making $3,850, less income, $2,200, and we have $1,650, as cost of street lights burned 4,000 hours, costing .0189 per hour, and furnishing 1,058 candle power per hour for one cent.

CHARITON, Iowa, plant, $50,000; coal, $1.25 per ton; operating expenses from 1894 to 1900, $40,757.75, less total income for same time, $34,379.01, leaving an operating expense, over receipts, of $6,378.74, averaging $1,063.12 per year; and interest at four per cent on cost of plant, $2,000; depreciation, $2,500; taxes, $500; making $6,063.12, cost of street lights, being for six five-ampere lights and 117 32-candle power incandescent lights used in streets, equivalent to 46 1,200-candle power lamps, and costing $131.80 per year per lamp, burned 2,500 hours, costing .0527 per hour, and furnishing 227 candle power per hour for one cent.

The cost being so high, we applied to the city clerk for his correction of the figures, showing operating expenses each year since 1894, and the income received for the same time, and the amounts given are those certified to by him.

He also said that a judgment of $19,000 was obtained against the city, but they had paid this off. He did not explain what the judgment was for, or how it was obtained.

CRAWFORDSVILLE, Ind. So much had been said about this plant, and the officials refusing to give any information or allow any examination, it was decided to make a full canvass of the city and interview its most prominent citizens who were only interested in the plant as tax payers.

A strange condition of affairs was disclosed. The first one approached was asked if they had a municipal plant in that city, and his answer was, "We do own our light plant, but if we did not we would not, for, in my opinion, it will bankrupt any city." Another being asked if the plant was not a success; his answer was, "So far as the cost of plant and street lights is concerned, the venture is certainly a fearful failure. The plant can be duplicated to-day with new apparatus for $30,000 less than it has cost the taxpayers."

One citizen, when asked about cost of the electric plant, answered,

"It is impossible to procure facts, the ring who manage the city finding the electric plant in the past giving more milk than any other teat accessible, refuse to make public any information."

Another, when interviewed, said, "The ring that initiated the enterprise assured the taxpayers that the maximum outlay would in no contingency exceed $32,000, but afterwards admitted that it had cost $80,000, while the cost now exceeds $105,000."

One citizen, when asked if the profits on commercial lights did not pay the entire expenses of running the plant, answered, "After deducting the entire income for such lights and adding interest, depreciation, operating expenses and salaries, the street lights cost the tax payers $85 per lamp per year." One prominent tax payer, when asked if the profits of the electric plant were not lessening the taxes very materially, said, "No: the expense of keeping the plant running bids fair to become an unendurable tax, and for the past two years pressure has been urgent to have the plant sold, but the amount of investment above honest cost is so great that no private company will make an offer that the city can bring itself to come down to."

When one citizen was asked why the tax payers did not have experts examine and appraise the plant, answered. "Practical constructors offered, two years ago, to duplicate the plant for $50,000. The fact is, we are much in the condition of the man who had the wolf by the tail, afraid to either hold on or let go. My impression is, however, that so burdensome is the matter, the city will ere long make some radical change, feeling that it can scarcely be the loser by any release from present status." The lights were burned 2,000 hours, costing .0425 per hour, and furnishing 470 candle power per hour for one cent.

If space permitted a large number of of other interviews, showing the same feeling and results could be given.

No wonder the local paper said, "What our electric lights cost is something past finding out, at least so far no one has been able to find out. For a long time we took it for granted that everything was all right, but a little investigation goes to show that everything is all wrong."

CHICAGO, Ill., plant, $1,155,000; coal, $2.50 per ton; operating expenses, $157,486.53; interest at 4 per cent, $46,200; depreciation, $57,750; taxes, $11,000; making $272,436.53, cost of street lights burned 4,000 hours, costing .0235 per hour and furnishing 851 candle power per hour for one cent.

The *Western Electrician* of Chicago, an authority upon the electrical business of that city, says:

It is the old story. City officers and commercial electric-light companies make their calculations and estimates on different bases. For instance, in Mr. Ellicott's tables there is no allowance whatever for depreciation. Instead, the city electrician charges to operating expense such amounts as were necessary to renew any part of the plants. He contends that "the ordinary depreciation of the plants is taken care of in

the annual expenses of maintaining the lights, and an examination of the plants will show that the application of a further and theoretical per cent for depreciation is not necessary or warranted in order to obtain the true cost to the city." But is this a prudent and sound position? Can the "true cost" be arrived at by such an assumption? An examination of the city plants would show that they are equipped with new or comparatively new machinery. There is now comparatively little expense for renewals, because such a large amount of new equipment has been purchased within the last two or three years. But how will the case stand ten or twenty years from now? Will the present dynamos and lamps be still in service, and, if they are, will they be regarded as economical, up-to-date apparatus, or as obsolete? The inventory shows that the city electric-light plants, aside from land and buildings, are valued at about $1,000,000. Ten per cent of that set aside for depreciation will add at once $34.56 to the cost of operating and maintaining the 2,893 arc lamps figured in Mr. Ellicott's tables, bringing the cost up to $90.49 a lamp. If a five per cent basis of depreciation be accepted (and managers of plants will agree that that is a small percentage to set aside to keep the plant intact and economically up to date for an indefinite period), the cost of operation and maintenance is increased from $55.93 to $73.21.

Take the matter of taxes. The real and personal property represented in the Chicago municipal lighting plants is $1,155,000. The city receives no revenue in taxation from this property. The plant is necessary for the lighting of the streets, so that if the city did not own it somebody else would and would pay, say $11,000 in taxes. This loss in revenue is part of what the city pays for its lights, and amounts to $3.80 a lamp. Added to the $73.21 above (taking the five per cent depreciation), the cost of operation and maintenance is now $77.01.

Then, too, is it not fair to assume that the tax payers' money put into these plants is worth something? Should we not allow interest on the investment? Does any private person invest money in a business without charging against that business the minimum interest that his capital would bring in any event? If the city borrows money to build electric light plants does it not pay interest on the bonds? The justice of this charge seems to be self-evident. Let us assume, then, a 3½ per cent rate of interest on the inventoried investment of $1,150,000. That is $40,425 per annum, or $13.97 a lamp. This increases the annual cost of each lamp to $90.98.

Passing over the free water of the city plants, insurance and other items that might be enumerated, it will be evident that Mr. Ellicott's total cost per lamp of $55.93 is increased, by taking into account additional elements of cost that seem to be perfectly just, fair and reasonable, to $90.98. When a manufacturer's profit is added and the other missing items are accounted for, it is seen that the central station price of $103 a lamp is not excessive. Mr. Ellicot figures labor, material, maintenance and office salaries. What have been added? Depreciation (five per cent only, with no account of depreciation in buildings), taxes and interest on investment. The cost of water and insurance is still to be included.

Surely there is nothing unreasonable in the conclusion that the "true cost" of a municipal arc light in Chicago, figured on an equitable basis, is $92 a year or more, rather than $56.

It is with no desire to indulge in mere captious criticism that the *Western Electrician* points out what it believes to be the more rational method of arriving at the cost of municipal arc lighting. Nor is the question of the propriety of the city lighting its own streets now under discussion. It is perfectly well known that the department of electricity is ably managed and that the city of Chicago has no more honest, capable and zealous officer than Edward B. Ellicott. But, considering merely the cost of arc lighting in Chicago, we have endeavored to show that it is fair to include elements of cost other than those given in the report, and that, in consequence, the "true cost," based entirely on the figures given, is considerably over $90 a lamp.

CONNEAUT, Ohio, plant, $22,500; operating expenses, $4,022.52; interest at five per cent, $1,125.05; depreciation, $1,125.05; taxes, $225; sinking fund to pay bonds, $1,000; making $7,497.62, less income, $5,044.62, and we have $2,453, cost of street lights burned 2,000 hours, costing .0245 per hour, and furnishing 489 candle power per hour for one cent.

CHAMBERSBURG, Pa., plant, $40,000; operating expenses, $14,000; interest at four per cent, $1,600; depreciation, $2,000; taxes and insurance, $400; sinking fund to pay bonds, $1,000; making $19,000, less income, $9,800, and we have $9,200, cost of street lights burned 4,000 hours, costing .023 per hour, and furnishing 869 candle power per hour for one cent.

COLUMBIA CITY, Ind., plant, $23,500; coal, $2.10 per ton; operating expenses, $6,500; interest at six per cent, $1,410; depreciation, $1,175; taxes and insurance, $235; sinking fund to pay bonds, $1,175; making $10,485, less income, $5,500, and we have $4,985, cost of street lights burned 3,000 hours, costing .0339 per hour, and furnishing 589 candle power per hour for one cent.

COUNCIL GROVE, Kan., plant, $7,000; burned lights 1,875 hours, costing .0779 per hour, furnishing 154 candle power per hour for one cent.

CHICOPEE, Mass., plant, $98,950; use 1,200 candle power lamps, costing, as shown by Gas and Electric Light Commissioners, $109.74 per year per lamp, burned 3,000 hours, costing .0365 per hour, and furnishing 328 candle power per hour for one cent.

DECATUR, Ill., plant, $50,000; coal, $1.25 per ton; operating expenses, $7,000; interest at five per cent, $2,500; depreciation at five per cent, $2,500; taxes and insurance, $500; making $11,500, cost of street lights burned 2,100 hours, costing .035 per hour, and furnishing 571 candle power per hour for one cent.

In the above, only five per cent is charged for depreciation. The mayor, when asked regarding the depreciation, answered, "If an allowance of ten per cent was made on the cost of the plant to keep it in repair, and another ten per cent on account of depreciation, the charge would not be too heavy."

The local paper in Decatur says:

"The municipal lighting is a snare and delusion. While the system of book-keeping in the clerk's office shows an annual expense account of $5,458, the actual cost of these lights is about $12,458."

DETROIT, Mich., is conceded to be the best municipal plant in the United States, and, when the system was adopted, the tax payers were told that the offer made by the private company would be "cut in two," and that laborers would have "better pay and shorter hours." These were the promises and assumptions made to induce the tax payers to consent to the adoption of the system. Experience is a good, but often an expensive teacher, and the people of Detroit are realizing the fact. In 1893, the private company offered to make a contract for ten years, at an average price of $102.50 per lamp per year. Those advocating municipal ownership claimed they could "cut this price in two"; therefore, to do this, they must produce the lights for $51.10 per lamp. The report made by the authorities in 1897 stated that the operating expenses were $64.19 per lamp, and the 1898 report makes operating expenses $51.85. If taxes, insurance, interest at four per cent, and depreciation at only five per cent, were added to the cost as given by the city for operating expenses, it would make the cost for 1897, $106.36, while for 1898 it would be $94.17 per lamp. In above figures, nothing is allowed for a sinking fund; they have $650,000 in bonds outstanding. It is well known that, with thirty-year bonds, one-thirtieth of the amount must be provided for each year, and that this item is as much a part of cost as the labor or coal account. In the case of Detroit, $21,666.66 per year must be provided to meet these bonds as they mature. This would add to the cost of lamps in 1897, $13.85 per lamp, making a total for that year $120.21 per lamp, and for 1898 it would add $11.90 per light, making the total for that year, $106.07. It will be seen that cost for 1898 was $12.34 less than it was in 1897. How was this reduction accomplished? By putting the men on a salary, and not allowing them anything for over time; also reducing the number of men, and requiring those left not only to do the work of men discharged, but caring for 180 additional lights.

In 1897 they burned 1,564 arc lamps, and employed 30 men to trim and care for them, while in 1898 they compelled 26 men to trim and care for 1,744 lights; this caused a strike of the trimmers, and lamps were out for 4,292 hours. In 1897 they employed six engineers and seven firemen, while in 1898 they only had five engineers and six firemen, and in 1897 the seven firemen handled 15,032,230 pounds of coal, while in 1898 the six firemen were compelled to handle 17,075,525 pounds of coal, showing that, notwithstanding the business required 2,043,395 pounds more of

coal in 1898 than in 1897, they forced six men not only to handle what seven men handled the year before, but 2,043,395 pound additional, and in 1899 the six men were compelled to handle 3,134,200 pounds more coal than was handled by the seven men in 1897. In this way, they reduced the cost per lamp $10.30 in 1898, while they only made a reduction of $2.04 in all the other branches. In 1899 they made a reduction of $5.39 per lamp, $3.29 of which was taken from the men's wages and $2.10 from the other departments. This shows that nearly all of the reduction for the past three years has been affected by taking it out of its employes' wages.

The plant has only been running since April, 1895. Now the lighting commissioners say some of the apparatus must be changed for larger machines. This means selling the present apparatus as second-hand and old style, which will not bring 50 per cent of its cost. They call for an appropriation of $38,000 for this exchange. How much of this is a dead loss?

They have charged to depreciation, the past four years, $21,295.11 per year Suppose that amount is charged every year for 38 years, then you only have $809,214, while the cost of plant as given is $813,803, besides no provision is made for a sinking fund to pay the bonds of $650,000. Sufficient depreciation must be charged so that this fund will equal the cost of plant in a certain number of years, and experience has shown that the apparatus will not last over ten or 15 years.

Cincinnati pays a private company $84.90 per lamp per year, for a 2,000 candle power lamp burned every night all night, and, without assuming any risk or liability, procures her lights $21.17 per lamp less than it costs the city of Detroit to produce them under the most favorable conditions. The tax payers of Detroit were given theory when their plant was installed. Now theory is utterly destroyed by the stern facts of experience. Instead of producing the lights at half the price offered by the private company, the reports show that it has cost an average of $10.64 per lamp more than it would have cost if a contract had been made with the private company, and this on the basis of only five per cent for depreciation.

The *Detroit Tribune* says:

"The city finds itself with an elaborate white elephant on its hands. The people cannot fail to realize that the creation of the new department has simply increased the opportunity for more wrangling in the city government and the facility with which private parties may control public affairs to suit themselves."

Detroit Free Press says:

In accordance with his announcement at the recent meeting of the Public Lighting Commission Wednesday evening, William A. Livingstone placed his resignation as a member of the board in the hands of Mayor Maybury yesterday morning.

While Mr Livingstone refuses absolutely to discuss his action, it is a well known fact among his friends that he has the utmost confidence in the ability of Secretary Ford Starring, and, believing him to be the man for the place, was determined to show his loyalty by resigning his

commissionership in case Starring should be forced to decline a reappointment. And so, realizing that the labor element, so long arrayed against Starring, was on the eve of victory, he resigned.

It is considered probable that Commissioners John Miner and C. H. Ritter will follow Mr. Livingstone's example at an early date. Thus it is seen that the Public Lighting Commission happy family is no longer intact. The annual efforts of the labor organizations, set forth since the lighting plant was established, to obtain a foothold there, have been at last successful. Last fall Commissioner R. H. Fyfe, scenting trouble from afar, tendered his resignation and gracefully withdrew. Other commissioners would have followed him, but held on, hoping that trouble could be averted.

The initial point of the attacking party was the secretary, whose position they believed to be the keystone to their success. Last year Secretary Starring maintained a ten weeks' fight to retain his position. This year he decided that such a fight was anything but pleasant to himself, and, to say the least, would be annoying to his friends on the commission. He did not regard the position worth all that he and his friends would have to go through to retain it. Last Tuesday he obtained the permission of a majority of the commissioners to call a meeting of the commission, and on Wednesday night they got together.

SECRET MEETING.

The meeting was a secret one, and though the office of the commission was besieged by newspaper men, none was permitted entrance, or given the slightest idea of what was going on.

It was learned yesterday, however, that Secretary Starring notified the commissioners that, rather than subject them to the annoyance they had gone through in the past in electing him, he would withdraw his name from the race for the secretaryship. While some of the commissioners were ready to stand by the secretary, it looked as if there would be a tie vote of Commissioners Ritter, Miner and Livingstone for, and Commissioners Simons, Ingram and Carhartt against. Starring, therefore, insisted on withdrawing his name.

CARHARTT'S IDEAS.

Commissioner Carhartt embraced the opportunity to say that he was thoroughly imbued with the idea that the only way to run a business was in harmony with the rules and regulations of organized labor, and that, as he represented that class as a commissioner, he would do everything in his power to unionize the plant in the fullest acceptance of the word. He said that he believed that not only should all employes belong to unions, but that the union label should be prominent on everything, and that all supplies should be purchased under the approval of labor organizations.

The other commissioners had but little to say, remarking that such a topic was inopportune. One commissioner, however, expressed his disapproval of the plan.

Secretary Starring said last night:

"I foresaw a repetition of the fight that was made against me last year. At that time certain charges were made against me in behalf of organized labor, setting forth that I was antagonistic to it. The charges were not proved before the commissioners, and I was reappointed.

"There are, however, half a dozen men, who were prominent in the strike against the commission by the trimmers in April, 1898, who, failing to get employment, have been acting as agitators, and kept the sentiment against me stirred up. It is well known that I am not antagonistic to organized labor, and I would be willing, if intrusted with the employment of labor at the lighting plant, to give preference to union men, all things being equal, and the business of the city as well subserved.

"I have maintained that the position of the commission has been right—that the members had no authority to delegate any of the powers vested in them, as representatives of the city of Detroit, to any person or organization. The taking of such power from the commission and placing it in the control of organized labor is a question that should be passed on by the voters at the polls, in a manner similar to that authorizing the issuance of city bonds, etc.

CARHARTT REPRESENTS ORGANIZED LABOR.

"The mayor favors organized labor at the public lighting plant, and appointed Commissioner Carhartt, the representative of such organizations. Mr. Carhartt's position in the matter is set forth in the following extract from a letter from him to me, dated December 11, 1899:

"'Of course, you are aware, Mr. Starring, that my position on the Public Lighting Commission is a unique one. My own personality does not enter into the matter at all. I was appointed to represent organized labor, and, while no promises have been made or asked, the wishes of organized labor, so long as they are compatible with what I believe is to be for the best interests of all concerned, will be recognized.'

"With other commissioners in harmony with Mr. Carhartt's views, as I learned, for the first time, at the meeting Wednesday night," continued Mr. Starring, "and with the probability of a number of my old associates being deposed, because of objections from organized labor, the position of secretary would have been an unpleasant one, and I am more than ever satisfied with my refusal to be a candidate for the position."

NO ONE SEEMED GLAD.

A visit to the lighting plant yesterday found groups of employes discussing the new condition of affairs. No one was found who expressed gladness at the prospect of having the plant unionized. In fact, it was discovered that at least ten of the workmen had withdrawn from the electrical workers' union during the last year, for reasons entirely personal between them and the union. Some of these did not wish their names mentioned, but said freely that they were blacklisted by the

union, and in time would, at the request of the union, be forced from their positions to make room for more loyal members of the union.

EXTRA EXPENSE PROBABLE.

One of the trimmers said it was all off with the introduction of the long burning inclosed arc lamp, and that the force of trimmers would soon be increased by about ten men, adding to the expense of that department over $7,000 per year. This is one of the most expensive departments of the plant, and an attempt at economy in it two years ago was the cause of the trimmers' strike.

Public Policy says:

TRUE AND ENTIRE COSTS NOT STATED.

An examination of the report by intelligent but unsympathetic eyes disclosed the fact that the cost given as the cost per lamp of the public lighting did not include the payment of interest on the $600,000 of bonds issued on behalf of the plant, a provision for a sinking fund to retire the bonds, proper allowances for depreciation, insurance against accidents of any kind, taxes relinquished and for taxes collected and invested in the plant to cover excess cost of construction. Gradually, as the years have passed, some of these omissions have been recognized and a partial provision for these items has been estimated for and included in a theoretical statement of the cost of lighting. We say theoretical, because the amounts estimated have never been withdrawn from the general fund and placed in a separate fund devoted to the purpose for which the estimate was made.

THE FIRST BREAK.

The theory of getting something for nothing by getting rid of highly paid corporation officials soon began to produce its legitimate results. Business men with large interests of their own to manage soon found they could not afford to subject themselves to the demands made upon their time by the interests of the public lighting commission. They discovered that they were not dealing with a subject calling for the sacrifices demanded by patriotism or ethical sentiments. They found they had only a plain business proposition to deal with, was to show by the municipal ownership and operation of the public lighting plant that they could save money for the tax payers. They found that one important item in the saving was their own work done for nothing. They found, in order that tax payers might get something for nothing, someone had to give something for nothing, and that someone was themselves. They tired of their task and one by one they dropped out of the commission.

A BUSINESS PROPOSITION.

Working for nothing or working for less than the service will command elsewhere is not a sound business proposition. The commission and Mr. Dow had to meet this contingency. It was met by Mr. Dow choosing to become one of the highly paid corporation officials, the

municipal enterprise was intended to destroy, rather than to remain a poorly paid public servant, beset by the criticisms and claims of numberless politicians, whose only idea of the service of the public lighting plant was its usefulness as a "pie counter."

SECRETARY STARRING AND THE TAXPAYERS.

Mr. Dow was succeeded by Mr. Starring, who has fought with a sincerity and ability in value far beyond the compensation he received to demonstrate the economic and financial efficiency of the Detroit public lighting plant. His efforts were for the benefit of tax payers. But each individual tax payer was in business for himself—conducting his business on business principles, taking care to get full value for every service he rendered or commodity parted with. They were not giving something for nothing. Their separate individual interest in the public lighting plant, or what it was possible for it to save for them, was so small they could not afford to give their valuable time to keep themselves correctly informed as to the difficulties met with in its management and the results. They valued the time it would cost them to know the merits of the contentions between Mr. Starring and his opponents and to sustain him worth more than what they could save by it, and, as they do not think it a good business proposition to give a greater for a lesser value, they left him to meet the fate that has now arrived.

ALL HOPE OF SUCCESS GONE.

All hope for the Detroit public lighting plant ever becoming a successful business proposition must now be abandoned. When a plant is operated for the benefit of tax-eaters, taxpayers become slaves. The only public benefit that can be derived from the present condition of the Detroit public lighting plant is that of a warning to other cities contemplating such enterprises to abandon them before it is too late. This is the warning given by Boston's municipal manufacturing industries to Pittsburg and all American municipalities. It is the warning given by the closing of the Chicago electrical repair shops some two years ago.

There has not been a year during its existence that the public lighting of Detroit supplied from its own plant has not cost tax payers more than the same service would have cost them under contract with a private corporation. There will never be such a year. The best disposition the city of Detroit can make of this plant is to follow the example of Philadelphia and lease it to a private corporation to be operated under contract.

DANVERS, Mass., plant, $45,174; use a 1,200 candle power lamp, costing, as stated by the Gas and Electric Light Commissioners of the state, $55.87, burned 1,742 hours, costing .032 per hour, and furnishing 375 candle power per hour for one cent.

DANVILLE, Va., plant, $18,000; building and water power leased of private company for which they pay $15 per year per horse power; operating expenses, $5,000; interest at 4 per cent, $720; depreciation,

$900; taxes, $180, making $6,800, less income, $1,200, and we have $5,600 cost of street lights burned 4,000 hours, costing .0155 per hour, and furnishing 774 candle power per hour for one cent.

The building in which their dynamos were located burned, destroying everything and entailing a loss of $9,000 and no insurance. This item is not included in above calculation of cost. The superintendent's salary is charged to the general expense account and not in the electric expenses.

DAWSON, Ga., plant, $12,000; coal, $2.80 per ton; operating expenses, $3,500; interest at 4 per cent, $480; depreciation, $600; taxes and insurance, $120; sinking fund to meet bonds, $500; total, $5,200, as cost of street lights burned 2,000 hours, costing .0464 per hour, and furnishing 258 candle power per hour for one cent.

DUNKIRK, N. Y., plant, $25,000; coal, $1.30 per ton; operating expenses, $5,000; interest at 4 per cent, $1,000; depreciation, $1,250; taxes and insurance, $250, making $7,500, cost of street lights burned 3,000 hours, costing .0263 per hour, and furnishing 760 candle power per hour for one cent.

ELBERTON, Ga., plant, $22,000; water power; operating expenses, $2,700; interest at 6 per cent, $1,320; depreciation, $1,100; taxes and insurance, $200; sinking fund for bonds, $600, making $5,920, less income, $2,000, and we have $3,920, as cost of street lights burned 2,000 hours, costing .035 per hour, and furnishing 342 candle power per hour for one cent.

ELGIN, Ill., plant, $27,000; coal, $2.00 per ton; operating expenses, $13,000; interest at 5 per cent, $1,350; depreciation, $1,350; taxes and insurance, $270, making $15,970, cost of street lights burned 2,500 hours, costing 0316 per hour, and furnishing 632 candle power per hour for one cent. The salary of the electrician is charged to general expenses and not to the lighting account. After using plant six years, they had to expend $10,000 to put it in shape to do their business.

EASTON, Pa., plant, $45,000; operating expenses, $12,000; interest at four per cent, $1,800; depreciation, $2,250; taxes and insurance, $450; making $16,500, cost of street lights burned 3,800 hours, costing .0307 per hour, and furnishing 651 candle power per hour for one cent.

The mayor says:

"In Easton the cost is claimed not to be over $87 per lamp, but both the city treasurer and controller claim that the cost is far in excess of those figures."

The *Express* says:

"The same number of lights as now used can be had of a private company for $8,000, or a saving to the city of $4,000 a year. The fact is the cost is excessive, and the service abominable."

This became so oppressive that a resolution was introduced into the council calling for bids from private companies, and, of course, if accepted, it would shut down the municipal plant.

ESTHERVILLE, Iowa, plant, $8,000; coal, $2.50 per ton; operating expenses, $2,500; interest at six per cent, $480; depreciation, $400; taxes and insurance, $80; sinking fund for bonds, $400; making $3,860, less income of $2,800, and we have $1,060, as cost of street lights burned 1,500 hours, costing .0271 per hour, and furnishing 442 candle power per hour for one cent.

EMMONS, Pa., plant, $2,600; lights burned 2,190 hours, costing .0511 per hour, and furnishing 391 candle power per hour for one cent.

FREMONT, Neb., plant, $25,000; coal, $3.35 per ton; operating expenses, $7,000; interest at six per cent, $1,500; depreciation, $1,250; taxes and insurance, $250; making $9,900, less income, $5,000, and we have $4,900, as cost of street lights burned 2,000 hours, costing .0278 per hour, and furnishing 431 candle power per hour for one cent.

FAYETTE, Mo., plant, $12,000; coal, $2 per ton; operating expenses, $3,500; interest at four per cent, $480; depreciation, $600; taxes and insurance, $120; sinking fund, $600; making $5,300, as cost of street lights burned 1,500 hours, costing .086 per hour, and furnishing 232 candle power per hour for one cent.

FAIRFIELD, Iowa, plant, $7,000; coal, $2.25 per ton; operating expenses, $1,279.71; interest at five per cent, $350; depreciation, $350; taxes and insurance, $70; making $2,049.71, as cost of street lights burned 1,954 hours, costing .052 per hour, furnishing 384 candle power per hour for one cent.

FULTON, Mo., plant, $16,000; coal, $1.75 per ton; operating expenses, $4,000; interest at five per cent, $830; depreciation, $830; taxes and insurance, $160; sinking fund to pay bonds, $1,200; making $7,020, less income, $5,000, and we have $2,020, cost of street lights burned 3,000 hours, costing .039 per hour, and furnishing 512 candle power per hour for one cent.

FORT WORTH, Texas, plant, $44,000; coal, $3.10 per ton; operating expenses, $5,624.15; interest at six per cent, $2,640; depreciation, $2,200; taxes and insurance, $440; sinking fund to pay bonds, $2,200; making $13,104.15, cost of street lights burned 2,000 hours, costing .0364 per hour, and furnishing 329 candle power per hour for one cent.

FREDONIA, N. Y., plant, $16,000; coal, $2.00 per ton; operating expenses, $2,750; interest at five per cent, $800; depreciation, $800; taxes and insurance, $150; making $4,500, as cost of street lights burned 1,500 hours, costing .0384 per hour, and furnishing 520 candle power per hour for one cent.

FREDERICK, Md., plant, $17,000; coal, $2.50 per ton; operating expenses, $6,000; interest at four per cent, $680; depreciation, $850; taxes and insurance, $170; making $7,700, cost of street lights burned 2,200 hours, costing .0443 per hour, and furnishing 451 candle power per hour for one cent.

GRANVILLE, Ohio, plant, $6,000; coal, $1.25 per ton; operating expenses, $1,400; interest at six per cent, $360; depreciation, $300; taxes and insurance, $50; sinking fund for bonds, $300; making $2,410, cost of street lights burned 1,320 hours, costing .0454 per hour, and furnishing 440 candle power per hour for one cent.

GRAFTON, W. Va. The following report was made to the mayor and common council, and purporting to show the entire cost to the tax payers of operating 94 2,000-candle power arc lights every night and all night.

To the Honorable Mayor and Council of the City of Grafton:

GENTLEMEN:—I beg to submit this report of the city electric light plant from May 1, 1899, to December 31, 1899—eight months.

Repairs on engine, $4.75; repairs on dynamo, $1.10; oil, water, and packing, $62.20; carbons, $336.68; fuel, $182.00; tools, $15.83; new lamps, $32.00; labor, $54.64; material for lamps, $79.64; lamp trimmer, $350.00; miscellaneous hauling, $13.24; total for operating eight months, $1,129.45.

A local paper there, which advocates municipal ownership, publishes this report, and comments as follows:

"The report is an interesting document. It gives the public a detailed statement, showing the exact cost for the past eight months to be the insignificant sum of $1,129.45.

"We feel proud of the showing thus made, and believe the cost per light for Grafton is less than in any other city in the United States.

"Be it remembered right here that the item charged under head of labor, $54.64, was paid for repairs to line."

We give this report as a sample of many sent out purporting to show cost of lights.

The items show that they used an engine and dynamo; that they used $62.20 of oil, etc.; but not a cent is charged for a man to run this engine and dynamo all night every night in the year. Therefore, we must infer that it ran itself, stopping and starting automatically; that the oil used walked into the cups without assistance; that the $182 worth of fuel did not require any help in placing it in the furnaces; that the superintendent made no charges for his services; that the five per cent interest upon the $10,000 which plant cost paid itself, notwithstanding they had agreed to pay it; that there was no depreciation, no taxes or insurance. Every one knows that nearly all the charges and expenses of the electric plant were charged to some other department, but the public are told that the above account covers all the costs of producing the lights, and then compare the cost of lights made in this

way with prices of private companies. Does it benefit the tax payers, and why, if parties wish to give the facts, are not all the expenses and charges made public and placed where they belong?

GRAND LEDGE, Mich., plant, $10,000; burned 1,460 hours, costing .11 cents per hour, and furnishing 181 candle power per hour for one cent.

In this calculation plant is credited with all income received.

GREENWICH, Ohio, plant, $10,000; coal, $1.35 per ton; operating expenses, $1,792.60; interest at five per cent, $500; depreciation, $500; taxes and insurance, $100; sinking fund for bonds, $500; making $3,392.60, less income, $1,200, and we have $2,192.60, as cost of street lights burned 1,500 hours, costing .0664 per hour, and furnishing 301 candle power per hour for one cent.

GALVESTON, Texas., plant, $65,000; coal, $5 per ton; operating expenses, $25,000; interest at five per cent, $3,250; depreciation, $3,250; taxes and insurance, $650; making $32,800, cost of street lights burned 3,000 hours, costing .034 per hour, and furnishing 588 candle power per hour for one cent.

GREENFIELD, Ind., plant, $30,000; natural gas; operating expenses, $4,000; interest at six per cent, $1,800; depreciation, $1,500; taxes, $150; sinking fund to pay bonds, $1,500; making $8,950, cost of street lights burned 1,500 hours, costing .05 per hour, and furnishing 400 candle power per hour for one cent.

GRIFFIN, Ga., plant, $30,000; operating expenses, $5,500; interest at five per cent, $1,500; depreciation, $1,500; taxes and insurance, $300; sinking fund to pay bonds, $1,500; making $10,300, less income, $6,300, and we have $4,000, cost of street lights burned 2,200 hours, costing .0343 per hour, and furnishing 583 candle power per hour for one cent.

GOSHEN, Ind., plant, $24,000; coal, $2.95 per ton; operating expenses, $4,500; interest at six per cent, $1,440; depreciation, $1,200; taxes and insurance, $240; making $7,380, cost of street lights burned 2,400 hours, costing .0246 per hour, and furnishing 813 candle power per hour for one cent.

HOLYOKE, Mass. In December, 1896, the city council voted to establish a municipal plant, and on January 1, 1897, voted the second time, as required by law.

The Holyoke Water Power company filed with the city clerk a schedule of its gas plant and its electric plant, and offered to sell to the city the whole of both plants for $1,000,000. The company also offered to sell by lease in such form as is ordinarily used for such conveyance by it in Holyoke, one-half of one mill power of water to be used in connection with the gas plant, also sixteen now permanent twenty-four-hour

mill powers of water to be drawn from the first level canal, and used in connection with the electric plant. The sum paid for rent of said mill powers to be $1,500 a year for each and every one of said sixteen and one-half mill powers, payable in semi-annual payments.

On January 13 a special committee, consisting of the mayor and three members of the city council, was constituted, with the duty to examine the gas and electric light plants and ascertain the present value of the same, also to confer with the officers of said company and determine, if possible, a price for such plants as will be mutually satisfactory.

The special committee procured experts, who, with the permission of the company, were to examine and value the gas and electric plants. They could not agree, and the proposition was rejected.

The Water Power company, on March 5, made application to the supreme judicial court to compel the city to take both its gas and electric plants, and to pay for same in accordance with the offer of the company as given above, and in compliance with the law.

Another committee was appointed by the council to make further examination.

This committee reported in June that they had hired two gas and two electric non-resident experts, at a fixed price per day, to examine the plants and testify concerning them before the commission appointed by the court; they had also engaged a number of architects, civil engineers and contractors to make plans and estimates of the two plants; that the work of these parties had been completed, and was in the hands of the city's legal counsel; that the expenses of the committee had been $5,291.67.

The above action was taken in 1898.

In April, 1899, the aldermen received the following communication:

To the Board of Aldermen:

Gentlemen:—At a meeting of the Manufacturers' Association the following vote was passed unanimously:

That, in the present financial situation, it would be disadvantageous to the city of Holyoke to acquire the gas and electric plants of the Holyoke Water Power Company, and the Manufacturers' Association recommends that the board of aldermen postpone the taking of those plants, for a period of five years at least, and that it will make a contract with the Holyoke Water Power Company on the best possible terms.

At the May meeting of the aldermen it was ordered, That the committee on municipal lighting be and they are hereby ordered and instructed to confer with the city solicitor and, acting on his advice, to make some arrangement, if possible, with the Holyoke Water Power Company to defer the taking of the gas and electric lighting plants of said company for a period of five years, provided the rights of the city are fully protected.

Ordered further, That the said committee be and they are hereby empowered, in case said matter is deferred, to make a contract with the

Holyoke Water Power Company for furnishing gas and electric lights and power to the city of Holyoke for a term of five years.

The committee reported and recommended that the following proposition be sent to said company, to be entered into by the said company and the city of Holyoke, subject to consent given or satisfaction thereof by the legislature of the state.

That a fifteen year contract be made for public lighting at the following rates: 275 to 300 lights, 1,200 candle power, each $85; 300 to 400 lights, 1,200 candle power, each $83.33⅓; over 400 lights, 1,200 candle power, each $75. After the expiration of each successive five years from the date of the contract, the city may demand and have a submission to arbitration for reducing the price below that fixed in the contract, in case the cost of manufacture or distribution should be reduced by new discoveries, or inventions, or progress in the art in successful commercial operation.

It was voted that the Committee on Municipal Lighting be and they are hereby authorized and instructed to offer the terms proposed in their report to the Holyoke Water Power Company, and in case said terms are accepted, the board of public works and mayor are hereby authorized to enter into a contract with the said company on the said terms, and to petition the legislature of the state for permission to make said contract binding, and for a discontinuance of said suit.

Here we have the experience of a city who spent thousands of dollars over municipal ownership, by investigations and committees, and after the private company had placed their plants at the disposal of the city, they wanted to withdraw from the plan which their action under the state law compelled them to carry out, but when the city officers learned the facts regarding these plants they were willing to make a fifteen-year contract at $85 per lamp, with water power. This proposition on the part of the city was made to the private company after they had employed four experts, besides architects and contractors to give them the facts regarding cost of electric lighting.

HENDERSON, Minn., plant, $6,000; coal, $4.00 per ton; operating expenses, $1,700; interest at 6 per cent, $360; depreciation, $300; taxes and insurance, $60; sinking fund to pay bonds, $300, making $2,660, less income, $2,000, and we have $660, cost of street lights, being .0333 per hour, and furnishing 240 candle power per hour for one cent.

HINGHAM, Mass., plant, $24,413; operating expenses, $10,194.65; interest at 4 per cent, $976.52; depreciation, $1,220.65; taxes, $384, making $12,775.82, less income, $5,302.33, and we have $7,473.49, cost of street lights burned 1,500 hours, costing .0479 per hour, and furnishing 250 candle power per hour for one cent.

HANNIBAL, Mo., plant, $62,000; coal, $1.55 per ton; operating expenses, $15,540; interest at 5 per cent, $3,000; depreciation, $3,100; taxes and insurance, $620; sinking fund to pay bonds, $2,400; making

$24,660, less income from incandescents and power, $13,202, and we have $11,458, as cost of street lights burned 2,500 hours, costing .0458 per hour, and furnishing 436 candle power per hour for one cent.

HUDSON, Mass., plant, $45,273; cost of a 2,500 candle-power lamp, as made by the Gas and Electric Light Commissioners, was $132.08, burned 1,653 hours, costing .0799 per hour, and furnishing 250 candle power per hour for one cent.

HULL, Mass., plant, $119,367; use 25 candle power incandescent for streets, costing, as stated by the Gas and Electric Light Commissioners, $60.18 per year, burned 1,387 hours, costing .043 per hour for incandescent lights.

HUBBARD, Ohio, plant, $6,000; coal, $1.65 per ton; operating expenses, $2,200; interest at 5 per cent, $300; depreciation, $300; taxes and insurance, $60; sinking fund to pay bonds, $300, making $3,160, less income, $2,200, and we have $960, cost of street lights burned 1,260 hours, costing .038 per hour, and furnishing 526 candle power per hour for one cent.

HAMILTON, Ohio, had a mayor who was an advocate of municipal ownership, and, in his report, he said, "He had made an investigation, and, in some cases, the figures show that the city could get its lights for nothing, making enough out of the profits on general electric lighting business to provide all the arc lights required free of expense." This mayor's statement is the visionary and theoretical part of the plan. What does the practical part or real experience show after the plant has been established?

The city owns water works started in 1884 and cost $315,000. In 1889 they started a gas plant costing $160,000, and an electric light plant costing $100,000 was started in 1895. This amount of $575,000 was raised by selling city bonds. The city clerk says:

"The threat to shut down the electric light plant is because they are out of funds. Hamilton, of all the cities in the United States, has been most afflicted with the municipal ownership craze, and now, having its fill on theory, is reaping the results, and we must bear and grin as best we can under adverse circumstances.

"But, on the condition that now confronts us, we ought to try and inject a little common sense into the municipal cranium, and try and evolve some scheme whereby we can kite along for the present, and perhaps realize some of the fond expectations that were held out in the past.

"We are deluded in the belief that we have cheap water, gas and electric light. When we add to these luxuries the fact that we have so raised the rate of municipal taxation until it has become burdensome, and then compare with other cities of our size, we find that we are not as well off as we think we are.

"We are taxed to pay the interest on the water works bonds, as well as to provide for their redemption. We are taxed to pay the interest of the gas works and the electric light plant, as well as to provide for the redemption of bonds, and we are also taxed for the purpose of lighting the corporation, which is nothing more than double taxation. This is a curious situation, but is nevertheless true.

"While the water tax levy is up to the limit, it fails to pay the interest and bonds falling due, and the same may be said of the gas and electric light levy, and they also barely pay the interest charges, with no bonds yet falling due. When they do commence to fall due, how they are going to be paid is a serious question.

"We should realize that the annual interest charge for water, gas works and electric light is $28,000, with $10,000 water works bonds falling due each year, making a total charge of $38,000, which must be paid annually, and no assistance is rendered by either of said plants in helping to pay said charges: it looks like the city is carrying a heavy burden. * * * * The city has reached the condition that comes to every individual who reaches out beyond his means.

"Maturity comes and protest has been avoided during the past year by using heroic remedies. Refunding bonds as they fall due may be, in the opinion of many, good financiering, but that does not pay the debt or discharge the interest, which creeps along just the same as the bonds fall due, and which must be paid.

"Hamilton is being devoured whole by its interest charges. During the coming year the interest owing by the city will amount to the sum of $43,035; bonds falling due $48,000, or a total of $91,125, or nearly 90 per cent of the entire revenue of the city will be necessary for meeting these charges. We have had theory long enough, and we must meet the condition."

A correspondent writing from Hamilton says:

"The question of closing down the electric light plant is provoking much talk. To be practically thrown into utter darkness again all on account of mismanagement is not relished by those who pay the high tax rate to keep things moving along. The issuing of $15,000 worth of bonds to operate the plant is more than the people can stand, especially when the light plant has already cost $50,000 more than it should have cost the tax payers." Still the trustees announced that they would be compelled to shut down for want of funds.

The mayor gave the theoretical part of the plan. Here we have the actual or real experience after the plant has been established. Still later developments also show how such things end.

The city not being able to meet its obligations, Judge Crane, an attorney, filed a petition for a receiver for the city of Hamilton, with the following pleading, and alleging ten grounds in support of the application, viz.:

That the city is on the verge of bankruptcy.

That the city has refused to pay just debts which are a year overdue.

That the city has defaulted upon various bonded debts.

That the credit of the city grows worse each month.

That, through the extravagance of those in authority, more money is expended than the resources of the city will permit.

That the city is more severely taxed than any other in Ohio.

That large amounts of the city funds are misappropriated by those in authority.

That the city authorities do not take care of the city's finances according to law.

That the several funds are now depleted; that the schools cannot be kept open more than a month; that the street funds are exhausted; that there is no money to keep the library open for more than two months; that the city is unable to light its parks or public places, or to remove garbage, or clean the streets, and is otherwise is great danger of bankruptcy.

The city clerk claims they can pay all lawful obligations, and says:

"If these plants can be so managed as to pay the interest charge alone from out of their earnings, we could cut the levy $3.50 on each $1,000.

"Of the $14.20 of taxes collected on each $1,000 for city purposes, $8.10 goes to pay interest and bonds, leaving but $6.10 for the other needs of the city. The city has never yet defaulted in the payment of any interest or the payment of its bonds.

"But the next ten years are going to be hard ones on the tax payers, by reason of direct assessments, but the city has assets for every liability."

This means that tax payers have got to consent to assessments to meet the city's liabilities or lose their property, for every man's property in the city is mortgaged for these city debts.

E. B. Rogers, being interviewed, said:

"I think it was right. There is not a department in the city that is not in the rut. I think that one or three men, under instruction of the court, should be appointed to take charge of affairs. Everything costs us double, it seems."

Judge Crane said the bill had been marked O. K. by the committee on claims, and that the city had refused to pay it. Whether or not we get a receiver, he said, we wish to call a halt to the bonded indebtedness and the reckless expenditures, which are continually increasing.

The bonds of the city of Hamilton, in total, are $877,453, and only about 18,000 population. Here we have the direct results of a municipality going into a business enterprise. If the city had not adopted the plan of municipal ownership it would not stand in the position it does to-day.

The *Hamilton, Ohio, News* says:

"By the way in which the council seems determined to award the contracts for the new city electric light plant, the cost of the plant will run up to about $101,000. The people were assured originally that the plant would only cost $50,000, and a great array of figures was presented to prove this fact."

HENDERSON, Ky., plant, $33,000; coal, 75 cents per ton; operating expenses, $6,690.93; interest at five per cent, $1,650; depreciation, $1,650; taxes and insurance, $300; making $10,290, cost of street lights burned 2,000 hours, costing .0311 per hour, and furnishing 643 candle power per hour for one cent.

HAMILTON, N. Y., plant, $30,000; coal, $3.10 per ton; operating expenses, $4,000; interest at four per cent, $1,200; depreciation, $1,500; taxes and insurance, $150; sinking fund for bonds, $500; making $7,350, less income, $2,500, and we have $4,850, as cost of street lights burned 2,200 hours, costing .044 per hour, and furnishing 272 candle power per hour for one cent.

HIGGINSVILLE, Mo., plant, $16,000; coal, $1.80 per ton; operating expenses, $4,800; interest at six per cent, $960; depreciation, $800; taxes and insurance, $160; sinking fund for bonds, $650; making $7,370, less income, $4,500, and we have $2,870, as cost of street lights burned 1,500 hours, costing .0444 per hour, and furnishing 270 candle power per hour for one cent.

HERINGTON, Kan., plant, $28,000; burned 1,825 hours, costing .14 per hour, and furnishing 136 candle power per hour for one cent.

HOLLAND, Mich., plant, $4,000; operating expenses, $9,500; interest at four per cent, $1,600; depreciation, $2,000; taxes and insurance, $400; making $13,500, less income, $8,500, and we have $5,000, cost of street lights burned 2,000 hours, costing .0416 per hour, and furnishing 480 candle power per hour for one cent.

HERKIMER, N. Y., plant, $18,600; coal, $2.50 per ton; operating expenses, $3,433.15; interest at four per cent, $744; depreciation, $930; taxes and insurance, $105; sinking fund for bonds, $700; making $5,912, cost of street lights burned 3,294 hours, costing .0256 per hour, and furnishing 781 candle power per hour for one cent.

HIGH POINT, N. C., plant, $13,000; coal, $4.10 per ton; operating expenses, $2,200; interest at six per cent, $780; depreciation, $650; taxes and insurance, $130; making $3,760, less income, $1,500, and we have $2,260, cost of street lights burned 1,500 hours, costing .0302 per hour, and furnishing 397 candle power per hour for one cent.

HUNTINGTON, Ind., plant, $15,000; lights burned 2,190 hours, costing .0491 per hour, and furnishing 408 candle power per hour for one cent.

INDIANOLA, Iowa, plant, $25,362.45; coal, $1.20 per ton; operating expenses, $5,100; interest at five per cent, $1,268.12; depreciation, $1,268.12; taxes and water rent, $253.62; sinking fund to pay bonds, $1,600; making $8,889.86, less income, $3,873.34, and we have $5,016.52,

cost of 135 16-candle power incandescent street lights, being $37.15 per lamp per year, burned on moonlight schedule, until midnight.

JACKSONVILLE, Fla., plant, $150,000; operating expenses, $38,039.10; interest at five per cent, $7,500; depreciation, $7,500; taxes and insurance, $1,500; sinking fund to pay bonds, $6,000; making $60,539, less income, $45,569, and we have $14,970, as cost of street lights burned 4,000 hours, costing .0233 per hour, and furnishing 858 candle power per hour for one cent.

An action was brought against the city for damages caused to an individual, and the United States court awarded $1,500 to the plaintiff.

JOHNSON, Vt., plant, $7,000; water power, operating expenses, $600; interest at 4 per cent, $280; depreciation, $350; taxes and insurance, $70; sinking fund for payment of bonds, $300, making $1,600, less income, $1,100, and we have $500, cost of incandescent street lights burned 1,400 hours.

JACKSON, Ohio, plant, $20,000; operating expenses, $6.000; interest at 4 per cent, $800; depreciation, $1,000; taxes and insurance, $200; sinking fund to pay bonds, $1,000, making $9.000, less income, $4,500, and we have $4,500, cost of street lights burned 2,000 hours, costing .0375 per hour, and furnishing 533 candle power per hour for one cent.

One citizen stated that he had 128 incandescent lights, and that they only cost him $6.22 a month, being .0487 per lamp per month. Another claimed that the cost to him of 18 incandescents was five cents per month, the other tax payers being assessed to make up the loss caused by such business.

JACKSONVILLE, Ill., plant, $19,650; coal, $1.74 per ton; operating expenses, $7,000; interest at 5 per cent, $982; depreciation, $982; taxes and insurance, $196, making $9,160, cost of street lights burned 2,000 hours, costing .027 per hour, and furnishing 740 candle power per hour for one cent.

JAMESTOWN, N. Y., plant, $80,000; coal, $1.45 per ton; operating expenses, $20,228.09 interest at 4 per cent, $3,200; depreciation, $4,000; taxes, $1,794.40; sinking fund to pay bonds, $6,200, making $35,422.49, less income, $8,264.39, and we have $27,158.10 cost of street lights burned 4,000 hours, costing .0229 per hour, and furnishing 524 candle power per hour for one cent.

The mayor said to a committee from Middletown, N. Y., that they "are engaged in commercial lighting to some extent, enough so that the city controls the price charged for lighting both by electric and gas plants. This branch of the lighting department is not only profitable to the municipality, but it is a great source of satisfaction to the consumer." The following action, taken by the citizens of Jamestown, does not appear to confirm the mayor's statement:

The council appointed a committee to investigate the municipal electric plant, and to decide upon the question of selling the commercial parts of the plant. At the council meeting this committee reported and recommended the sale of this department of the plant. The report was as follows :

"Appropriated in 1895 $14,589, transferred $2,000 ; in 1896 appropriated $12,000, transferred $3,000 ; 1897, appropriated $15,123, transferred $4,000 ; 1898, appropriated $16,000 ; in 1899, $6,700. Interest 5 years, on outstanding bonds, $12,400, making $95,812.

Five years street lighting, from statements published, average, $13,000 —total, $65,000 ; and we have $30,812, cost of commercial plant.

Commercial machinery on hand, per inventory, $12,450, showing an approximate loss of $18,362. Of this there is yet $7,000 on hand to run until April 1st, 1900. If this $7,000 will see them through, they have about $18,000 in five years that is unaccounted for, and nothing for depreciation since the plant was built."

The mayor opposed the action of the committee and made some very strong charges, which called for an answer from the committee as follows :

" I supposed it was facts and figures that it was the duty of the committee to furnish, as nearly as they could from sources available, of the success or failure of the commercial portion of our city's electric light plant. This was done conscientiously, and we reported accordingly."

The mayor says : " I don't know where they obtained their figures." The chairman of committee answers as follows : " For his information as well as for all interested, they were taken from the official reports of the common council and from the annual reports of the treasurer. * * I ask any and all to examine the official records, and see who, if any one, is falsifying figures. Expense account, in my judgment, should be charged with much that is now charged to the plant. I am aware that the larger the expense account is the more will be the monthly average of our arc lights, but in justice to tax payers I say nothing should be charged to either plant as permanent that the manager cannot at any time show you and produce a voucher bill for same, if required. If any part or portion is worn out, destroyed or lost, all such should be made good from expense account. In looking over the invoice of the commercial plant, it seems to me that I see several amounts, amounting to a goodly sum that should be in expense account.

S. W. THOMPSON, Chairman.

A tax payer of Jamestown, in the local paper, says :

" The mayor, in all the time he spent looking up municipal lighting, did not obtain any information as to prices in the city of Jamestown. He did not tell that he knew of one concern that paid the city two cents per 1,000 Watts, and another ten cents per 1,000 Watts. Now, it is a fact that incandescent lights are furnished for ten cents each. It is also a fact that ten incandescent lights cost as much to run as one supposed 1,200 arc. Ten incandescent lights at ten cents would be $1. Now, who

would ever think of furnishing an arc light for $1? He did not tell the *Journal* that there were 63 lights furnished free of charge. He gives the prices in other cities. Why did he not give Jamestown's prices? Oh, no! the tax payers would be surprised.

"The special committee is composed of good men, and, no doubt, they have looked into all matters pertaining to commercial lighting, and I think I can safely say that it is the wish of all Jamestowners who pay taxes that the council sustain this special committee. Municipal ownership in Jamestown is a failure, and there doesn't seem to be any one who knows who to put the blame on."

KALAMAZOO, Mich., plant, $43,000; coal, $2.45 per ton; operating expenses, $13,000; interest at five per cent, $2,150; depreciation, $2,150; taxes and insurance, $430; making $17,730, cost of street lights burned 3,000 hours, costing .0295 per hour, and furnishing 677 candle power per hour for one cent.

KENDALLVILLE, Ind., plant, $8,000; coal, $2.25 per ton; operating expenses, $28,000; interest at five per cent, $400; depreciation, $400; taxes and insurance, $50; making $3,650, less income, $1,000, and we have $2,650, as cost of street lights, burned 2,000 hours, costing .022 per hour, and furnishing 909 candle power per hour for one cent.

LOWELL, Mich., plant, $23,000; water power; operating expenses, $4,077.70; interest at five per cent, $1,150; depreciation, $1,150; taxes and insurance, $230; sinking fund for bonds, $1,150; making $7,757.70, less income, $3,613, and we have $4,144.70, as cost of street lights burned 1,500 hours, costing .043 per hour, and furnishing 431 candle power per hour for one cent.

LISBON, Iowa., plant, $5,000; coal, $2.50 per ton; operating expenses, $1,500; interest at four per cent, $200; depreciation, $250; taxes and insurance, $25; sinking fund for bonds, $250; making $2,225, less income, $1,600, and we have $625, as cost of street lights burned 1,500 hours, costing .032 per hour, and furnishing 625 candle power per hour for one cent.

LEON, Iowa, plant, $13,000; coal, $1.90 per ton; operating expenses, $3,100; interest at six per cent, $780; depreciation, $650; taxes and insurance, $130; sinking fund to pay bonds, $500; making $5,160, less income, $3,300, and we have $1,860, cost of 54 16-candle power incandescent lights for streets burned until 10.30 o'clock only, on moonlight schedule, being $34.44 per lamp per year.

LOGANSPORT, Ind., plant, $130,665.45; natural gas; operating expenses, $23,073.35; interest at five per cent, $6,533.27; depreciation, $6,533.27; taxes and insurance, $1,306.65; making $37,446.54, less income, $19,946.77, and we have $17,499.77, cost of street lights burned 4,000 hours, costing .024 per hour, and furnishing 833 candle power per hour for one cent.

The plant was installed in 1895, and in 1899, they had to put in new boilers and engines, at an expense of $12,491.24.

The net earnings in 1899 were $7,000 less than the previous year.

In an open discussion Councilman Boyer charged that "There was mismanagement in operating the plant."

Councilman Thos. Austin asserted that the plant was not making expenses, and that, by reasons of expenditures from the general fund, private citizens who did not have the service were paying taxes to give their neighbors luxuries, which consumers should pay themselves, and that it was evident that the city was losing money.

We have here an illustration of how a municipal plant operates when controlled by politics.

The present administration is democratic, and when the plant was initiated it was republican, and the democrats say they cannot raise rates, as it would re-act on the party, showing the business management of municipalities.

A committee from Washington, Ind., who visited Logansport, were told that the city was lighted free of cost; that a dwelling house with 14 lights only paid 98 cents per month for the whole number.

LEWISTON, Me., plant, $25,000; water power; operating expenses, $8,000; interest at four per cent, $1,000; depreciation, $1,250; taxes and insurance, $250; water rent, $700; making $11,200, cost of street lights burned 4,000 hours, costing .0178 per hour, furnishing 674 candle power per hour for one cent.

LANSING, Mich., plant, $106,000; coal, $2.25 per ton; operating expenses, $18,000; interest at five per cent, $5,300; depreciation, $5,300; taxes and insurance, $1,060; sinking fund to pay bonds, $3,000; making $32,660, less income, $20,000, and we have $12,660, cost of street lights burned 4,000 hours, costing .0253 per hour, and furnishing 790 candle power per hour for one cent.

The mayor says:

"That the plant has cost $106,000, and is far from being worth any such amount, and in thus doing business the city is really engaged in wholesale larceny.

"If the question was now, for the first time, presented to the city whether they should embark in the business of furnishing commercial lights, I should most assuredly say that it should not. We cannot sell it for anything like its cost. We ought to go out of the business, and charge the loss up to experiment fund."

Their lights were so unsatisfactory that they paid an expert $400 to tell them how to remedy the evil, and he told them they must spend $5,000 in order to stop the trouble.

LYONS, Iowa. The city auditor, with two other officials, made an investigation of the operating expenses of the municipal plant for ten years, and they found that, prior to January 1, 1897, the average expenses of the plant had been $113 per lamp per year, with a 1,200 candle power

lamp operating on a moonlight schedule to midnight. These are the facts as found by the city officials, showing that the cost was .0773 per hour, and only furnishing 155 candle power per hour for one cent.

MIAMISBURG, Ohio, plant, $11,000; coal, $1.72 per ton; operating expenses, $3,377.92; interest at five per cent, $550; depreciation, $550; taxes and insurance, $110; making $4,587.92, cost of street lights burned 2,000 hours, costing .0395 per hour, and furnishing 506 candle power per hour for one cent.

MARSEILLES, Ill., plant, $30,000: water power; operating expenses, $2,500; interest at five per cent, $1,800; depreciation, $1,800; taxes and insurance, $300; making $6,100, less income, $3,500, and we have $2,600, as cost of street lights burned 3,500 hours, costing .0148 per hour, and furnishing 1,351 candle power per hour for one cent.

MARTINSVILLE, Ind. Street lighting is done by the city. No account is kept of the cost of operation.

MONTPELIER, Ohio, plant, $15,000; coal, $2.50 per ton; operating expenses, $3,417.79; interest at six per cent, $900; depreciation, $750; taxes and insurance, $100; sinking fund for bonds, $750; making $5,917.79, less income, $3,542.21, and we have $2,375.58, as cost of street lights burned 1,500 hours, costing .0465 per hour, and furnishing 430 candle power per hour for one cent.

MATTOON, Ill., plant, $20,000; coal, 75 cents per ton; operating expenses, $4,375.36; interest at five per cent, $1,000; depreciation, $1,000; taxes and insurance, $100; making $6,475.36, cost of street lights burned 2,000 hours, costing .0297 per hour, and furnishing 673 candle power per hour for one cent.

MADISON, N. J., has a municipal plant, and at a meeting of the city council, Councilman Anderson stated that "It is a condition and not a theory that effects the borough of Madison. We are like a man in business who owes a bonded indebtedness of $115,000. The annual interest upon this bonded debt is $5,750, annual expenses of conducting the business, $13,184.25, making a total of $18,934.25. Deduct from this the revenue, $14,400, and it shows an annual loss of $4,534.25. Of course the bonded indebtedness will not be paid, and the plant each year is becoming less valuable. Finally it will be comparatively worthless, the bonds unpaid a floating debt, and no funds on hand, thus leaving the borough in a worse financial condition each year. *It will be seen also that a large number enjoy water and lights which others pay for.*" This councilman's statement, as given above, shows a loss each year of $4,534.25, not including anything for depreciation or taxes, and this showing includes the water works, which, we are told, when run in connection with electric lights, reduce the cost very largely. Such facts disclosed by a

member of the city council, in a discussion at one of their meetings prove very clearly that the reports sent out by advocates of municipal ownership and claiming that the business at Madison was a success are not in accordance with the facts or the true condition.

MISHAWAKA, Ind., plant, $30,000; coal, $1.98 per ton; operating expenses, $8,000; interest at 6 per cent, $1,800; depreciation, $1,500; taxes and insurance, $300; sinking fund for bonds, $1,150; making $12,750, less income, $7,000, and we have $5,750, as cost of street lights burned 2,200 hours, costing .05 per hour, and furnishing 400 candle power per hour for one cent.

MUNCIE, Ind., plant, $30,000; coal, $2.65 per ton: operating expenses, $5,781; interest at 4 per cent, $1,200; depreciation, $1,500; taxes and insurance, $300; sinking fund to pay bonds, $1,000; making $9,781, cost of street lights burned 3,200 hours, costing .0209 per hour, and furnishing 956 candle power per hour for one cent.

MEADVILLE, Pa., plant, $20,000; coal, $2.16 per ton; operating expenses, $5,500; interest at 5 per cent, $1,000; depreciation, $1,000; taxes and insurance, $200; making $7,700, cost of street lights burned 3,500 hours, costing .02 per hour, and furnishing 1,000 candle power per hour for one cent.

MARSHALLTOWN, Iowa, has been cited in numerous places as showing a remarkable record and success of its municipal plant. At the convention in Columbus the mayor of Marshalltown made a report of that plant. It was stated in his report that the water-works bonds had been refunded at 4 per cent interest; that three men were employed in the water-works plant; that they paid each of these men $5 additional salary when electric lights were started; the coal required to run the lights was given as 108 tons per year. That account, as reported, stood as follows:

"Interest on $16,000 at 5 per cent, $800; renewal on $16,000 at 5 per cent, $800; salary of men at lighting station, $180; lineman, $720; coal, $135; running expenses, $200; making a total of $2,835 for the year. Thus the city has the use of 98 arc lamps of 1,200 candle power at a cost of $2.835 per year, or $29.50 per light per year."

In examining the city clerk's report for 1899, I find that they are paying 4½, 5 and 8 per cent interest upon their bonded debt, making an average of 5 6-10 per cent. The plant cost $12,000, and the cost of making the addition to the water-works building was $2,000, and the expense of changing the dynamos was $4,500, making a total of $18,500. The salary of the men at the lighting station was given at $180 per year. They were employing three men at the station, and paid these $180 additional wages, but now they have to employ four men, one of these being paid $60 per month, making an expense of $720 to add to the electric light pay roll, and a total of $1,620 per year. Cost of coal was given at 108 tons, cost-

ing $135 per year, while the report shows that they used last year 452½ tons, costing $565. All running expenses were given as $200. They claim to burn 98 lamps; this would require at least one and one-half carbons per lamp per night, and if only burned 300 nights in the year, would make a total of 44,100 carbons, at $10 per thousand would be $441.

Therefore, we have the following: Pay roll, $1,620; coal, $565; carbons, $441; interest on $18,500 at 5 6-10 per cent, $1,036; depreciation at rate made by mayor, $925; taxes, $35; making a total of $4,622, being $48.14 per year, and costing .0228 cents per hour, and furnishing 526 candle power for one cent.

In the above calculation nothing is included for repairs upon engine, dynamo, belts, or for oil, brushes, office expenses, lamps, or water rent. A private company at Jackson, Mich., deliver the lights at a cost of .0178 cents per hour, furnishing 1123 candle power for one cent. There is nothing very remarkable in the record at Marshalltown except the fact that they burn the lights a few hours each night a part of every month.

The private company at Jackson is furnishing 597 more candle power for one cent than is furnished by the municipal plant at Marshalltown. The plan of charging nearly all the expenses to the water works does not relieve the tax payers. That this has been done in Marshalltown is evident. An examination of the council proceedings for Aug. 14, 1899, shows that the only expense for the month of July charged to the electric light was one lineman's wages of $60, and a small item for supplies, while in the water-works account we find $466 charged as pay roll, and $325 charged for wages of engineers and superintendent, besides all the oil, waste, and repairs. The report says: "Installed 14 new arc lights," but there is nothing to show that they cost a cent. Who paid for them, and to what account were they charged? They also have on hand two arc dynamos, which cost in 1887, over $6,000, and now cannot be sold for more than $600, thus making a loss of $5,400 to the taxpayers. This has not been considered in the above calculations of cost. Statement was made that "the water works pays all running expenses and interest on the debt, for all extensions and repairs, and left the city several thousand dollars profit." Why, if this is the case, was a three-mill tax on the dollar for water works voted Aug. 14, 1899?

MACON, Mo., plant cost $50,000; 40 arc, 2,000 candle power. The electric lights and water works run as one plant, and no way of separating accounts. The operating expenses, including interest, depreciation and taxes, amounted to $11,300, charging only one-half to the electric lights, gives $5,900 for the year, less income from incandescent lights, $2,500, leaves a net expenditure of $3,400 for 40 street lights, being $85 per lamp per year, costing .0226 per hour, and furnishing 884 candle power per hour for one cent.

MARIETTA, Ohio, plant, $21,000; natural gas; operating expenses, $6,592.75; interest at four and one-half per cent, $945; depreciation,

$1,050; taxes and insurance, $210; sinking fund to pay bonds, $750; making $9,547.75, cost of street lights burned 4,000 hours, costing .0213 per hour, and furnishing 938 candle power per hour for one cent.

Interviewing a prominent citizen, he said:

Marietta owned the electric light plant and a theater; that six of the council refused to act any longer for love or money; that politics was in charge of the business; but that they lived in hopes, as their lunatic asylum was only 40 miles away.

MARTINS FERRY, Ohio, plant, $30,000; coal, 61 cents per ton; operating expenses, $7,849.46; interest at five per cent, $1,500; depreciation, $1,500; taxes and insurance, $300; sinking fund to pay bonds, $1,500; making $12,649, less income, $3,920, and we have $8,729, cost of street lights burned 3,000 hours, costing .0285 per hour, and furnishing 701 candle power per hour for one cent.

MARSHALL, Mich., plant, $50,000; water power; operating expenses, $3,800; interest at five per cent, $2,500; depreciation, $2,500; taxes and insurance, $500; sinking fund to pay bonds, $2,000; making $11,300, less income, $4,500, and we have $6,800, cost of street lights burned 2,000 hours, costing .0404 per hour, and furnishing 495 candle power per hour for one cent.

MOUNT PLEASANT, Iowa, plant, $22,000; coal, $1.95 per ton; operating expenses, $3,000; interest at five per cent, $1,100; depreciation, $1,100; taxes and insurance, $220; making $5,420, less income, $3,000, and we have $2,420, cost of street lights burned 2,000 hours, costing .0161 per hour, and furnishing 496 candle power per hour for one cent.

MAZOMANIE, Wis., plant, $10,000; coal, $3.55 per ton; operating expenses, $2,000; interest at five per cent, $500; depreciation, $500; taxes and insurance, $100; sinking fund to pay bonds, $500; making $2,600, less income, $2,000, and we have $600, cost of incandescent street light burned until eleven o'clock each night, costing $10.90 per lamp per year.

MARBLEHEAD, Mass., plant, $85,518; have 1,600 candle power lamps, and cost, as shown by the Gas and Electric Light Commissioners of the state, $68.75 per year, burned 3,000 hours, costing .0229 per hour, and furnishing 689 candle power per hour for one cent.

They also use 30 candle power incandescents, costing $17.73 per year, and 16 candle power, $9.42, and 25 candle power at a cost of $14.75 per year.

MIDDLEBORO, Mass., plant, $106,494; have 1,200 candle power lamps, and cost, as shown by the statement of the Gas and Electric Light Commissioners, for lights burned until midnight, $102.47, and those burned all night, $186.31. The midnight lamps burned 1,272 hours,

costing .08 per hour, and furnishing 150 candle power per hour for one cent. The all night lamps burned 2,313 hours, costing .08 per hour, and furnishing 150 candle power per hour for one cent.

The *New Bedford Standard* says:

"Middleboro's experiment in the municipal ownership of a lighting plant shows that something more than the mere ownership of engines and dynamos and poles and wires is essential to the success of such a venture. Middleboro is a thriving place. It has an intelligent population. Many of its inhabitants are more than ordinarily successful business men. Yet the lighting experiment under the direction of the town is confessedly a flat failure. It is horrible costly, so costly, in fact, that it is impossible to figure out one of those rosy statements with which the advocates of municipal lighting plants are wont to regale the people. We have heard it intimated that there has been bad management. There certainly has not been harmonious management.

MADISONVILLE, Ohio, plant, $30,000; coal, $1.85 per ton; operating expenses, $4,631; interest at five per cent, $1,500; depreciation, $1,500; taxes and insurance, $150; sinking fund to pay bonds, $1,500; making $9,431, less income, $5,119, and we have $4,313, cost of street lights burned 1,500 hours, costing .0378 per hour, and furnishing 317 candle power per hour for one cent.

MARION, Ind., plant, $24,000; natural gas; operating expenses, $5,500; interest at four and one-half per cent, $1,080; depreciation, $1,200; taxes and insurance, $240; sinking fund to pay bonds, $1,200; making $9,220, cost of street lights burned 2,000 hours, costing .0281 per hour, and furnishing 711 candle power per hour for one cent.

MORGAN PARK, Ill., plant, $5,500; coal, $1.85 per ton; operating expenses, $1,500; interest at six per cent, $330; depreciation, $275; making $2,105, cost of street lights burned 1,400 hours, costing .03 per hour, and furnishing 666 candle power per hour for one cent.

The authorities state that all the operating expenses, except the salaries, are charged to the water works.

MARQUETTE, Mich., plant, $100,000; water power; operating expenses, $6,855.35; interest at five per cent, $5,000; depreciation, $5,000; taxes, $500; sinking fund to pay maturing bonds, $4,750; making $22,105.35, less income, $9,473.61, and we have $12,631.74, as cost of street lights burned 4,000 hours, costing .0263 per hour, and furnishing 760 candle power per hour for one cent.

MORRISVILLE, Vt., plant, $25,000; water power; operating expenses, $2,800; interest at four per cent, $1,000; depreciation, $1,250; taxes and insurance, $50; sinking fund for bonds, $1,000; making $6,100, less income, $3,550, and we have $2,550, as cost of street lights burned 1,500 hours, costing .0809 per hour, and furnishing 247 candle power per hour for one cent.

NORTH EAST, Pa., plant, $9,000; coal, $1.95 per ton; operating expenses, $2,200; interest at five per cent. $450; depreciation, $450; taxes and insurance, $90; making $3,190, less income, $1,500, and we have $1,690, as cost of street lights burned 1,500 hours, costing .04 per hour, and furnishing 500 candle power per hour for one cent.

NEGAUNEE, Mich., furnishes a fair illustration of municipal ownership. They believed the statements of parties who were trying to sell them a plant, and, after it was installed and operated a couple of years, they found it was a loosing affair, and finally employed two experts from Chicago to make a thorough investigation and report cost of lights furnished by the municipal plant.

The following report of these experts to the mayor and council shows fully the working of such business:

To the honorable mayor and common council of the city of Negaunee:

GENTLEMEN:

"We beg to submit herewith our report, based upon an examination of the books of the electric light plant and water plant, the examination being made, as per your instructions, to determine what the actual cost per year for the lighting plant has been to the city, and from this to determine how much it is costing the city for arc lamps for street lighting.

"We find that the accounts of the two plants are really kept in three sets of books. One set for water, which books are intended to show the expenditures and receipts of what might be called books covering the operation of the plant. A similar set are kept for the electric light, the third set being the city department books.

"While the books checked and balanced with each other on the various accounts examined by the writers, the methods employed in keeping these accounts is not such as shows the true cost to the city of either the water plant or the electric light plant. Prior to the installation of the electric light plant, there being but one set of operating accounts, all charges, receipts, disbursements, etc., were necessarily charged to the water account, so that a true statement could be very easily arrived at.

"Under the present arrangement, both the electric light station and pumping station being operated under the same roof, using fuel jointly, likewise, oil, waste, etc., and the labor account being divided between the two plants, it will require a very careful set of records being kept of the station, and necessitate the accounts being more segregated, and much more carefully kept at the clerk's office, in order to ever be able to determine how much each station is costing the city of Negaunee per year to operate. The actual output of the pumping station can only be guessed at in gallons, and as to the output of the electric light station the same can be said. It must be evident to you that, unless the relative outputs are known, and the efficiencies of the apparatus, it is absolutely impossible to tell what proportion of the fuel used should be charged to the pumping station and what to the lighting station.

"A careful examination, however, of the accounts of the pumping station, prior to the electric light plant being put in and operated in conjunction with same, should show, within a reasonable limit, whether too much is now being charged to the pumping station or not enough, and from the records it would seem to show that entirely too much was being charged against the pumping station, as, for instance, the running expense account, as shown in the pumping station ledger for the fiscal year 1897 to 1898, and then from 1898 to 1899, is as follows:

Operating expenses, '97 to '98,	$4,497 44
Income of earnings,	7,392 19
Net earnings,	$2,894 75
Operating expenses, '98 to '99,	$5,884 88
Income of earnings,	6,970 29
Net earnings,	$1,085 41

From this you will see that the operating expenses for the fiscal year 1898 to 1899 increased $1,387.44, while the revenue for the same period decreased $421.90. With the exception of an increase of $10 a month for each of the two engineers, there is no apparent reason why the cost of operation for the year 1898 to 1899 should have been within some $1,500 of what it was in 1897 to 1898, as over $2,000 was spent on water mains in 1897 to 1898, whereas the accounts show that only $648.60 was spent in betterments and improvements on the water plant from 1898 to 1899.

As the fiscal year for the city begins each April 1st, and as the lighting plant started Sept. 3, 1897, we will only be able to take one complete year for operating expenses, receipts, etc., for the lighting plant, to wit: April, 1898 to April, 1899. This year is in reality from March 1st to March 1st, rather than from April, as the accounts are supposed to be closed in March, the recorder making a statement the 1st of April.

The following is a copy of the recorder's report for the electric light station for the fiscal year 1898 to 1899:

RECEIPTS.

Electric light,	$4,346 25
Materials and lamps,	304 90
Gross receipts,	$4,651 15

EXPENDITURES.

Oil,	$ 66 96
Fuel,	1,444 94
Service,	147 28
Lamps,	147 19
Running expenses,	62 65
Salary,	2,050 00
Gross expenses,	$3,919 02
or a balance in favor of electric light plant of	732 13

The above balance of $732,13 means that the city, after paying $5 per month per arc light and $25.25 per month for incandescent lighting, which lights are in the city hall, engine and hose houses and band stand, still has $732.13, to be credited to cost of operation. This statement is apparently true as far as moneys paid out through orders from the recorder's office and moneys received at the recorder's office, but is by no means true statement as to the cost per year of the plant to the city.

To get the true cost of operating any business, and particularly an electric light station, factory or any place where there is machinery and material which depreciates more or less rapidly, in addition to the actual operating expenses, that is such expenses as represent fuel, oil, labor, etc., a certain depreciation must be charged as well as interest on investment, to show a true statement as to the actual cost of the station, factory or what not per year.

The cost of the plant to the city, as shown by the electric light books, March 15, 1898, is $11,692.23, this including the original contract price of $9,974, and the addition to building at the power station of $376, or a total of $10,350, the $1,342.83 including labor and material which had been put into the plant from the date of starting to the above date.

This is not a true statement as to the cost of the plant, for the writer finds in the city department books that $1,000 was transferred in September, 1897, and $2,000 was transferred from city water fund to electric light fund, and further that payments made to F. B. Rae, engineer for the electric light plant, had been charged to city tax fund and not to the electric light plant, this amount being $662.75, or at least this is all the charge that can be found against his account, and as the only way of finding same is to go through the stubs of check books or through the journal entries of the city department. This $3,662.75, which has been added to the cost of the electric light plant, makes a total of $15,355.58 for the true cost of the plant to April, 1899.

During the fiscal year 1898 to 1899, $836.44 is charged to account of electric light plant construction, which should represent an additional value to the plant, but examination of account shows that at least 50 per cent of this amount should be charged to running expenses. Dividing this account and putting half of it in betterments and improvements brings the total cost of the plant to April, 1899, to $15,773.80.

The total expense of the plant for the year ending April, 1899, is $4,757.96, and from this we will deduct $418.22, to get the operating expenses, making $4,339.74, as the cost of operating for the year ending 1899.

The depreciation in your plant we will take at five per cent, although you will find that the depreciation in the cost of this plant will be very much greater than five and much nearer ten per cent, but we will take five, as that was the estimate made by your consulting engineer, who installed the plant. We will also allow a five per cent interest on investment, or a total of ten per cent on $15,773.80, or $1,577.38, which is to be added to your operating expenses of $4,339.74, giving a total cost to

the city for the operation of the electric light plant of $5,917.12 for the last fiscal year.

Your books show a total earning of $4,651.15, which leaves a deficit of $1,265.97, instead of a profit of $732.13, or a difference of $1,998.10 between the April statement, as shown by your books, and the correct statement.

"As the receipts did not equal the cost of operation by $1,265.97, and, as the incandescent lighting for the city is but a small item, to determine the real cost of an arc lamp per year, we should divide this amount by the average number of lamps which have been in service, viz., 35, and add same to the amount charged to the city, viz., $60 per year per light, which brings the cost to $93.33, as the cost to the city per arc lamp for street lighting on a moonlight schedule.

"In the first part of this report, your attention was called to the increase in cost of operating the plant and the decreased revenue received from the pumping station since the electric light plant had been in operation, viz., in the year 1898 to 1899 the cost of operation increased $1,387.44, and the revenue decreased $421.90.

"As the division of the operating expenses between these two has been, necessarily, guessed at, it is but logical to assume that this increase in the water plant is due, to a large extent, to charges being made to the water plant, in the way of fuel, material, etc., which should have been made to the electric light. A most conservative estimate would be to charge $500 of this $1,387.44 back to the electric light, for, as previously shown, the city added $2,213.11 to the value of the pumping station from 1897 to 1898, and only $648.60 from 1898 to 1899, yet the total cost of operating from 1898 to 1899 was over $1,300 more than the preceding year, and the only visible increase legitimately should have been $240, in the way of increase of salary of the two engineers. Taking this $500 as an increase in the cost of operation would bring the cost per arc lamp to the city for the last year $106.49.

"The cost of coal has been $2.78 per ton until August 1st, and the writer is advised that since that date the city has had to pay $3.40 per ton, or an increase of some 22 per cent. Taking the coal bills for last year, as shown by the electric light books, as a basis, this additional 22 per cent for the cost of coal still further increases the cost of the arc lights $8 per year, or, in other words, if, during the past year, you had to pay $3.40 per ton for coal, which is what you will now have to pay, your arc lights would cost $114.49 each per year to operate.

"We figure that the total expense to the city for the electric plant to April, 1899, including cost of plant, interest on investment, depreciation, and operating expenses is $23,198.96, and the total receipts $6,524.43."

This makes the lights burned 2,200 hours, costing .052 per hour, and furnishing 384 candle power per hour for one cent.

The following editorial from *Iron Ore*, published at Ishpenning, Mich., covers the case fully:

"The Negaunee plant has been losing money steadily since its installation.

"An expert was secured to figure this out for the administration of local affairs in that town, and he discovered that it was equal to some of the new copper stocks as a returner of dividends for the money invested.

"We know that municipalities which have adopted self lighting are prone to give their pets the best of it, and to help them out with funds from other accounts, and to charge up costs that should go to lighting to some other accounts, this being done in order to show the wisdom of their directing things. It wouldn't be good for them politically to acknowledge such an error.

"The curse of municipal ownership of things is political operation. It would not be a question of economy, but of who could be at the head and get the fat that could be tried out of the carcass.

"The business of the tax payer would be prostituted by the gentlemen of leisure who want to be kept in soft positions at the expense of those who pay taxes.

"And, as is common, it would not be the tax payers who would be sitting up nights trying to figure out how they could hold these fat takes.

"It is a sure thing that the tax payers of this city would see to the effectual killing of any proposition for the city to go into the lighting business, for the sake of providing soft places for a few gentlemen who were born tired.

"The movement has nothing in it but politics. It is a movement to help the gentlemen who desire to remain in office, and hope to create a little excitement favorable to their desires."

NORTHFIELD, Vt., plant, $40,042.29; water power; operating expenses, $7,000; interest at five per cent, $2,000; depreciation, $2,000; taxes and insurance, $400; making $11,400, less income, $5,000, and we have $6,400, cost of street lights burned 2,000 hours, and costing $25.60 per lamp per year for incandescent lamps.

After they installed the plant the water wheels failed and had to be replaced with new ones, at an expense of $4,400. The dam also gave out, and a new one had to be built, costing $4,297.52. These repairs were charged to construction, but should have gone to expense.

Before the plant was installed the total debt of the village was $2,082, now it is $46,248.

NEWBERRY, S. C., plant, $9,000; coal, $3.35 per ton; operating expenses, $3,500; interest at six per cent, $540; depreciation, $450; taxes and insurance, $90; sinking fund for bonds, $500; making $5,080, less income, $1,650; and we have $3,430, as cost of street lights burned 2,000 hours, costing .035 per hour, and furnishing 571 candle power per hour for one cent.

NEEDHAM, Mass., plant, $15,697; use 25 candle power incandescent for streets, and, as stated by the Massachusetts Commissioners, cost $11.94 per year, burned 1,249 hours.

NORTH ATTLEBORO, Mass., plant, $58,421; have 32 candle power incandescent for streets, costing, as shown by the Gas and Electric Light Commissioners, $10.96 per year, burned 1,249 hours.

ORTONVILLE, Minn., plant, $10,000; coal, $6 per ton; operating expenses, $2,145.48; interest at five per cent, $500; depreciation, $500; taxes and insurance, $100; sinking fund to pay bonds, $500; making $3,745.48, less income, $1,668.96, and we have $2,076.42, cost of street lights burned 2,000 hours, costing .0692 per hour, and furnishing 289 candle power per hour for one cent.

OVID, Mich., plant, $10,000; coal, $2.66 per ton; operating expenses, $3,700; interest at four per cent, $400; depreciation, $500; taxes and insurance, $100; sinking fund to pay bonds, $500; making $5,200, less income, $2,720, and we have $2,480, cost of street lights burned 1,590 hours, costing .0688 per hour, and furnishing 290 candle per hour for one cent.

OSAGE CITY, Kan., plant, $10,000; coal, $1.90 per ton; operating expenses, $2,000; interest at six per cent, $600; depreciation, $500; taxes and insurance, $100; sinking fund to pay bonds, $500; making $3,700, less income, $1,300, and we have $2,400, cost of street lights burned 1,500 hours, costing .0555 per hour, and furnishing 563 candle power per hour for one cent.

OXFORD, Ohio, plant, $35,000; coal, $2.60 per ton; operating expenses, $5,073; interest at four per cent, $1,400; depreciation, $1,750; taxes and insurance, $350; making $8,573, less income, $5,432, and we have $3,141, as cost of street lights burned 1,500 hours, costing .051 per hour, and furnishing 392 candle power per hour for one cent.

PAINESVILLE, Ohio, plant, $12,500; coal, $2.15 per ton; operating expenses, $4,300; interest at four per cent, $500; depreciation, $625; taxes and insurance, $100; sinking fund for bonds, $625; making $6,150, cost of street lights burned 2,000 hours, costing .0353 per hour, and furnishing 566 candle power per hour for one cent.

PORTLAND, Mich., plant, $20,000; water power; operating expenses, $2,000; interest at five per cent, $1,000; depreciation, $1,000; taxes and insurance, $200; sinking fund for bonds, $975; making $5,175, less income, $3,600, and we have $1,575, as cost of street lights burned 1,500 hours, costing .03 per hour, and furnishing 400 candle power per hour for one cent.

PADUCAH, Ky., plant, $40,000; coal, $1 per ton; operating expenses, $7,000; interest at five per cent, $2,000; depreciation, $2,000; taxes and insurance, $400; making $11,400, cost of street lights burned 3,000 hours, costing .0316 per hour, and furnishing 632 candle power per hour for one cent.

An interview of prominent citizens disclosed the fact that the plant was merely a political factor, and the city authorities refused to give any information, even to tax payers, as to the cost of running the plant.

Horses and feed purchased for the use of the plant are charged to the fire department, and other things in the same way.

One prominent tax payer stated that the physical condition of the plant had deteriorated, and very little attention has been shown it. The service has been bad, and complaints have been made by citizens as to the quality of light given.

PARIS, Ill., plant, $15,000; coal, $2.25 per ton; operating expenses, $3,500; interest at six per cent, $900; depreciation, $750; taxes and insurance, $150; making $5,200, as cost of street lights burned 3,000 hours, costing .0173 per hour, and furnishing 693 candle power per hour for one cent.

PAW PAW, Mich., plant, $20,000; water power; operating expenses, $1,300; interest at five per cent, $1,000; depreciation, $1,000; taxes and insurance, $100; sinking fund for bonds, $750; making $4,150, less income, $1,800, and we have $2,350, as cost of street lights burned 1,400 hours, costing .0289 per hour, and furnishing 553 candle power per hour for one cent.

PLAIN CITY, Ohio, plant, $12,000; coal, $2 per ton; operating expenses, $2,333.33; interest at five per cent, $600; depreciation, $600; taxes and insurance, $120; sinking fund for bonds, $600; making $4,853.32, less income, and we have $2,153.32, as cost of street lights burned 1,500 hours, costing .0422 per hour, and furnishing 473 candle power per hour for one cent.

PAWNEE CITY, Neb., plant, $8,500; coal, $3.25 per ton; operating expenses, $2,500; interest at seven per cent, $595; depreciation, $425; taxes and insurance, $85; sinking fund to pay bonds, $200; making $3,805, less income, $2,500, and we have $1,305, cost of street lights burned 1,500 hours, costing .0543 per hour, and furnishing 368 candle power per hour for one cent.

PEABODY, Mass., plant, $79,010; have 1,200 candle power lamps, and cost per year, as made by the Gas and Electric Light Commissioners, was $73.75, burned 3,100 hours, costing .0237 per hour, and furnishing 506 candle power per hour for one cent.

They also use 32 candle power incandescents for streets, costing $27.81 per year, and 50 candle power, costing $43.54 per year. Incandescents only burned 3,100 hours.

PETOSKEY, Mich. The following editorial from the local paper in Petoskey, Mich., explains municipal management:

"A BRIEF HISTORY OF THE ELECTRIC LIGHT INVESTMENTS OF THE CITY OF PETOSKEY.

"When Captain Rose owned the electric light plant it was thought that the cost of street lighting was too expensive, and that the city could do its own street lighting more economically. In consequence, it was conceived and recommended by the council and board of public works that a plant be installed, to cost about $8,000.

"That amount was voted, whereupon Captain Rose offered to sell his entire plant to the city, and the price was agreed upon at $16,000. The council again recommended that the previous action be dropped, and that the $16,000 be raised by bonding, which was also voted by the people.

"After the transfer was made, the council and board of public works appeared to discover that the plant was too ancient, or inadequate, or both, and for a third time recommended that the city mortgage itself for $12,000, for the purpose of repairing the building and installing new machinery.

"The officials stated that the improvements would not exceed that amount. What is the result? Not only have these honorable city officials dumped all the profits of the plant into it, but they drew $900 from funds other than the electric fund, and over drew the electric fund $600, as shown by the Grand Rapids expert's report, while the city is over $10,000 in debt for loose accounts, besides showing an unaccounted shortage of over $2,000. Out on the Charlevoix road, and on Emmet street, have stood for the past year, and are there to-day, wireless poles, monuments to the inefficiency, negligence, and mismanagement of the council and board of public works. Within a year $12,000 was almost unanimously voted for the purpose of modernizing the electric light plant. Now, what is the result? The plant is over $10,000 in debt, and over $2,000 has been squandered, which no one is able to account for.

"For nearly a whole year the people have been inconvenienced by miserable lighting service, and half of the time the town was in total darkness.

"George A. Horner, the expert accountant engaged by Mayor Barber, has finished his review of the electric light plant accounts. The results of his work are on file in the office of the city clerk, and should be carefully inspected by every tax payer in the city.

"From a brief examination of the figures, it appears that, instead of the new machinery costing about $7,000, as our people were first assured, the cost has been over $40,000.

"The following is a copy of the expert's report, as shown in the council room:

New construction,	$23,145.06
Old construction,	2,832.23
Real estate,	7,000.00
Machinery,	7,814.74
Accounts receivable,	349.30
Amounts receivable on roll,	388.94
Supplies,	147.04
Expense,	150.50
Total,	$41,827.81
Bonded debt,	$28,000.00
Floating debts,	10,159.46
Amount drawn from funds other than electric light,	917.02
Electric light fund overdrawn,	603.52
Interest on bonds,	327.00
Assets in excess of liabilities,	1,820.81
Total,	$41,827.81

"This shows that our practical assets in the unpaid for light plant amount to only $1,820.81. The above statement does not show, however, where the shortage in the supply account went to.

"There are shortages amounting to thousands of dollars. In other words, that is all we have to show for all the good money which we have put into the plant."

QUITMAN, Ga., plant, $16,000; coal, $1.50 per ton; operating expenses, $2,250; interest at six per cent, $960; depreciation, $800; taxes and insurance, $160; sinking fund to pay bonds, $500; making $4,670, less income, $2,250, and we have $2,420, cost of street lights burned 2,000 hours, costing .0484 per hour, and furnishing 413 candle power per hour for one cent.

QUAKERTOWN, Pa., plant, $22,000; coal, $2.10 per ton; operating expenses, $4,093; interest at four per cent, $880; depreciation, $1,100; taxes and insurance, $220; sinking fund to pay bonds, $750; making $7,043, less income, and we have $3,243, cost of street lights burned 3,000 hours, costing .025 per hour, and furnishing 470 candle power per hour for one cent.

ROCK FALLS, Ill., plant, $10,000; operating expenses, $4,000; interest at four per cent, $400; depreciation, $500; taxes and insurance, $100; sinking fund to pay bonds, $500; making $5,500, less income, $3,000, and we have $2,500, cost of street lights burned 2,000 hours, costing .0416 per hour, and furnishing 480 candle power per hour for one cent.

The mayor says:

It is shown by the foregoing figures that the plant ran behind. Where does this deficiency belong? The tax payer expects to pay the bonded indebtedness incurred by the light plant. He is willing to pay

all expenses due to running and maintaining the arc service, but he rightly objects when asked to make up a deficiency for which he may not be responsible.

The street light should be supported by and for the benefit of the general tax payer, who rightly asks that he shall not be taxed for more than the fair maintainance of this service.

Money paid in by general taxation has been absorbed by the expense of the incandescent lights. It is certainly not justice to tax those who do not use incandescent lights for the benefit of those who do.

ROCHELLE, Ill., plant, $11,000; coal, $2.15 per ton; operating expenses, $4,000; interest at five per cent, $550; depreciation, $550; taxes and insurance, $700; making $5,200, less income, $3,000, and we have $2,200, as cost of street lights burned 1,200 hours, costing .0416 per hour, and furnishing 480 candle power per hour for one cent.

READING, Mass., plant, $74,400; have 1,200 candle power lamps, and the Gas and Electric Light Commissioners state they cost $89.65 per year, burned 2,532 hours, costing .0354 per hour, and furnishing 338 candle power per hour for one cent.

RENSSELAER, Ind., plant, $8,000; coal, $1.95 per ton; operating expenses, $6,000; interest at six per cent, $480; depreciation, $400; taxes and insurance, $80; sinking fund to pay mortgage, $700; making $7,660, less income, $5,000, and we have $2,660, cost of street lights burned 2,000 hours, costing .0443 per hour, and furnishing 270 candle power per hour for one cent.

RUSHVILLE, Ind., burned the lights 2,190 hours, costing .0750 per hour, and furnishing 266 candle power per hour for one cent.

ST. CHARLES, Ill., light the streets with incandescents, and after deducting all income, lights cost $15.42 per lamp per year.

ST. CLAIR, Pa., plant, $26,500; coal, $1.00 per ton; operating expenses, $4,437.40; interest at four per cent, $1,060; depreciation, $1,325; taxes and insurance, $265; sinking fund to pay bonds, $1,325; making $8,412.40, less income, $6,321, and we have $2,091.40, cost of street lights burned 2,000 hours, costing .0365 per hour, and furnishing 563 candle power per hour for one cent.

SOUTH BOSTON, Va., plant, $2,000; operating expenses, $812.55; interest at six per cent, $120; depreciation, $100; taxes and insurance, $20; making $1,052.55, cost of street lights burned 1,500 hours, costing .0467 per hour, and furnishing 256 candle power per hour for one cent.

SALEM, Va., plant, $19,000; coal, 81 cents per ton; operating expenses, $2,625; interest at six per cent, $1,140; depreciation, $950; taxes and insurance, $190; making $4,905, less income, $1,800, and we have

$3,105, cost of street lights burned 1,500 hours, costing .0376 per hour, and furnishing 319 candle power per hour for one cent.

ST. PETER, Minn., plant, $20,000; coal, $3.15 per ton; operating expenses, $4,500; interest at five per cent, $1,000; depreciation, $1,000; taxes and insurance, $200; sinking fund for bonds, $500; making $7,200, less income, $3,780, and we have $3,420, as cost of street lights burned 1,500 hours, costing .0476 per hour, and furnishing 420 candle power per hour for one cent.

SHERMAN, Texas, plant, $21,000; coal, $2.50 per ton; operating expenses, $5,000; interest at six per cent, $1,260; depreciation, $1,050; taxes and insurance, $210; sinking fund to pay bonds, $500; making $8,020, cost of street lights burned 4,000 hours, costing .0211 per hour, and furnishing 948 candle power per hour for one cent.

SPRINGVILLE, N. Y., plant, $25,500; water power; operating expenses, $1,000; interest at three per cent, $765; depreciation, $1,275; taxes and insurance, $255; sinking fund to pay bonds, $1,000; making $4,295, less income, $1,500, and we have $2,795, cost of street lights burned 4,000 hours, costing .0155 per hour, and furnishing 1,290 candle power per hour for one cent.

STUART, Ia., plant, $11,400; coal, $1.50 per ton; operating expenses, $6,277.77; interest at five per cent, $570; depreciation, $570; taxes and water rent, $114; sinking fund to pay bonds, $570; making $8,101.77, less income, $4,880.38, and we have $3,221.39, cost of street lights being $18.94 per year per lamp for 16 candle power incandescent.

SHELBY, Ohio, plant, $38,000; coal, $1.85 per ton; operating expenses, $8,941.77; interest at six per cent, $2,280; depreciation, $1,900; taxes and insurance, $380; sinking fund to pay bonds, $750; total, $14,251.77, less income, $8,763.97, and we have $5,487.80, as cost of street lights burned 2,000 hours, costing .0409 per hour, and furnishing 488 candle power per hour for one cent.

STATESVILLE, N. C., plant, $9,000; wood, $1.50 per cord; operating expenses, $1,500; interest at five per cent, $450; depreciation, $450; taxes and insurance, $90; sinking fund to pay bonds, $400; making $2,890, cost of street lights burned 2,000 hours, costing .0466 per hour and furnishing 257 candle power per hour for one cent.

SANTA CRUZ, Cal., plant, $16,500; operating expenses, $7,250; interest at six per cent, $990; depreciation, $825; taxes and insurance, $165; making $9,230, cost of street lights burned 1,500 hours, costing .0732 per hour, and furnishing 273 candle power per hour for one cent.

SPRINGFIELD, Ill. The debt of the city had already reached the limit allowed by law, therefore, they could not adopt municipal ownership.

Parties wishing to sell a plant, and to evade this law, proposed installing a plant, and the city to levy a tax amounting to $113.33 per lamp per year, and, when the surplus over cost of lights amounted to the cost of plant, they would turn it over to the city. It was stated that the cost of the plant would be $60,000.

This scheme was inaugurated in 1895, and the tax payers have paid $113.33 per lamp per year, making a total of $176,258.80. When we add depreciation at five per cent for the five years, making $29,599.30, and interest, $21,000, clerk hire charged to the city, $3,000, taxes lost, $2,500, insurance charged to the city, $2,300, and $46,507.38 still due, and it makes a total of $281,165.48, as cost of plant and operating, on an average, 310 arc lamps for five years, deducting cost of plant, and lights cost $138.48 per lamp per year.

In the above calculation attorneys' fees, stationery and printing, and advertising charged to the city are not included.

They report plainly that city expended, or assumed, this amount. If not for purchase of plant, must have been for running the lights.

In April, 1900, F. W. Tracy notified the aldermen that "All was in readiness for the transfer of the plant to the city, and that there was still due on the same $46,507.38."

A deed, drafted by the same party, was presented, which specified that only $20,000 had been received in payment for the site of the plant and the appliances. The aldermen accepted of the deed, and authorized the payment of the $46,507.38. One alderman said, "There is no way to divide the plant. It is all one plant. The same boilers and same steam operate both street lights and private lights." What are the city buying?

That is, the city have paid $281,165.48, and get, in return, a second hand plant, which is connected with, and cannot be separated from, the commercial plant, and the use of 310 arc lights for five years.

The reason given to the public for not turning over the commercial part of the plant was because the state law prohibited city operating same, but that it will be turned over if the city can induce the legislature to pass a bill authorizing them to use it and do a commercial business.

This is the public statement made, while privately they state that the company do not wish such a bill passed, on the grounds of public policy. That the company prefer to have cities forbidden to undertake such business, and that they are satisfied with the present plan, and are opposed to any change.

They claim that there has only $20,000 been paid upon the plant, and that there is $46,507.38 still due. This would make the cost of the municipal part of plant, by their figures, $66,507.38, deducting this from total and we have a balance of $214,658.10.

As there might arise, under these conditions, questions which would be difficult answering, the following project was inaugurated and carried through.

In June, 1900, the city council, by a vote, accepted a proposition

from the Capital City Electric Company to buy the commercial plant for $20,000, and lease the municipal plant for five years.

A special committee, appointed by the mayor to investigate and ascertain the cost of the electric plant, reported that the cost of the commercial plant was $51,054.55, and the city sold it for $20,000, making a net loss of $31,054.55 for the tax payers upon the commercial plant. In addition to this, the city agrees to forfeit $15,000 as damages, if they fail to comply with the conditions of the lease.

After all the outlay and loss already sustained, the city agree to furnish, at their own expense, an electric plant complete, loose the taxes, the interest on the investment, and the depreciation upon the entire plant and repairs of same, furnish water free, and then, in addition, pay $60 per lamp per year, payable on the first day of each month, and, if not paid at that time, the city to pay seven per cent interest.

The lease also requires the city to furnish a station building, boilers, engines, pumps, and apparatus for running the commercial light machinery without charge to the company operating same, while the entire income from the commercial plant goes to the company.

Here we have the history and working of a plan which was to give the tax payers a plant free.

The same plan was to be adopted at Des Moines, Iowa, by the same parties, who desired to sell another plant, but the supreme court of that state put a quietus upon the business, and the plan had to be abandoned.

SOMERVILLE, Tenn., plant, $5,000; coal, $2.65 per ton; operating expenses, $1,800; interest at five per cent, $250; depreciation, $250; taxes and insurance, $50; sinking fund for bonds, $250; making $2,600, less income, $1,680, and we have $920, as cost of street lights burned 1,500 hours, costing .0438 per hour, and furnishing 456 candle power per hour for one cent.

ST. CHARLES, Mo., plant, $17,000; coal, $1.85 per ton; operating expenses, $4,700; interest at five per cent, $850; depreciation, $850; taxes and insurance, $170; sinking fund for bonds, $750; making $7,320, cost of street lights burned 2,000 hours, costing .0393 per hour, and furnishing 568 candle power per hour for one cent.

SOUTH NORWALK, Conn., plant, $42,500; operating expenses, $7,794.74; interest at four per cent, $1,700; depreciation, $2,125; taxes, $425; sinking fund to pay bonds, $2,125; making $14,169.74, less income from commercial lights and power, $5,304.78, and we have $8,864.96, cost of 98 1,400-candle power street lights, being $90.45 per year, burned only 1,900 hours, at an expense of .0476 per hour, and furnishing 294 candle power per hour for one cent.

On the 10th page of their 1897 report they give running expenses and salaries at $3,660.28; and on the 11th page of 1899 report, their running expenses and salaries are $7,480.30, more than double, while the

number of street lights in 1899 were two less than they were in 1897. Since the above report was made, the price of coal has advanced very heavily, and the general superintendent of the plant stated to a newspaper reporter "that the increase in the price of coal has taken away all the profits during the last few months from the operation of the electric lighting plant in South Norwalk. This, of course, will increase their expenses, and they must meet the contingencies that arise in all business enterprises, while if they had a contract with a private company, the loss occasioned in this way would have been borne by the private company and not by the tax payers.

STAUNTON, Ill., plant, $18,000; coal, 58 cents per ton; operating expenses, $2,620; interest at five per cent, $940; depreciation, $940; taxes and insurance, $100; sinking fund for bonds, $350; making $4,950, less income, $2,500, and we have $2,450, as cost of street lights burned 2,000 hours, costing .034 per hour, and furnishing 588 candle power per hour for one cent.

SMYRNA, Del., plant, $15,000; coal, $2.35 per ton; operating expenses, $2,745; interest at five per cent, $750; depreciation, $750; taxes and insurance, $150; sinking fund to pay bonds, $750; making $5,145, less income, $3,000, and we have $2,145, as cost of street lights burned 2,300 hours, costing .042 per hour, and furnishing 283 candle power per hour for one cent.

SHELBY, Mich., plant, $6,500; coal, $2.10 per ton; operating expenses, $1,000; interest at six per cent, $390; depreciation, $325; taxes and insurance, $65; sinking fund to pay bonds, $325; making $2,105, less income, $1,200, and we have $905, cost of street lights burned 1,500 hours, costing .0333 per hour, and furnishing 360 candle power per hour for one cent.

SHARPSBURG, Penn. The superintendent reports that the water works and electric lights are all run as one plant, and no separate accounts kept, but, as near as they can tell, the lights cost, not including interest, depreciation or taxes, about $60 per year. He also states that they can duplicate their plant for one-half what they paid for it.

SHICKSHINNY, Pa., plant, $8,000; coal, 85 cents per ton; operating expenses, $1,800; interest at five per cent, $400; depreciation, $400; taxes and insurance, $50; sinking fund for bonds, $400; making $3,050, less income, $1,200, and we have $1,850, as cost of street lights burned 2,200 hours, costing .035 per hour, and furnishing 571 candle power per hour for one cent.

SANTA CLARA, Cal., plant, $9,000; wood, $2.30 per cord; operating expenses, $1,720; interest at six per cent, $540; depreciation, $450; taxes and insurance, $90; sinking fund to pay bonds, $300; making $3,100, cost of street lights burned 1,200 hours, costing .0549 per hour, and furnishing 364 candle power per hour for one cent.

ST. JOSEPH, Mo., plant, $90,000; coal, $1.20 per ton; operating expenses, $22,000; interest at five per cent, $4,500; depreciation, $4,500; taxes and insurance, $900; making $31,900, cost of street lights burned 2,200 hours, costing .039 per hour, and furnishing 512 candle power per hour for one cent.

SWANTON, Vt., plant, $41,476.04; water power: operating expenses, $2,786.64; interest at five per cent, $2,073.80; depreciation, $2,073.80; sinking fund to pay debt, $2,073.80; making $9,008.04, less all income, $4,647.52, and we have $4,360.52, cost of street lights burned 3,000 hours, costing .058 per hour, and furnishing 344 candle power per hour for one cent.

Their operating expenses have increased every year. In 1895 they were $1,899.21, in 1896 were $2,375.62, in 1897 were $2,614.94, while in 1899 they were $2,786.64.

These expenses are taken as given by the officials in their reports to the tax payers.

The street lights in 1895 cost $95.17, in 1896, $115.79, in 1897 they cost $144.07, while in 1899, as shown by the village's own report, cost $174.42 per lamp per year. On the 36th page of their report we find the following statement: "Your trustees would report that, by the bursting of a large pulley, one of our dynamos was badly injured, causing great inconvenience to those using the lights, and an expense of about $250 to the village, and making it necessary for us to purchase a new dynamo, the expense of which was $3,000."

In addition to this amount, on page 30 are expenses, for setting this dynamo, of $278.79, and in trustees' account is an item of $64.65 express on armatures.

These items are reported as an addition to the plant, while they should go to repairs, as the new dynamo only takes the place of one destroyed.

This dynamo has evidently not been paid for, as it does not appear in any of their accounts.

SALEM, Ill., plant, $12,000: coal, $1.50 per ton; operating expenses, $2,400; interest at five per cent, $600; depreciation, $600; taxes and insurance, $120; sinking fund to pay bonds, $400; making $4,120, less income, $2,000, and we have $2,120, cost of street lights burned 1,500 hours, costing .0293 per hour, and furnishing 682 candle power per hour for one cent.

TOLEDO, Ohio. One of the most striking object lessons on municipal ownership in this country is at Toledo, Ohio. In 1890 they installed a gas plant, and the history of this business is a fair sample of hundreds of other cities. The testimony of Manager Herton shows that the city had spent $1,250,000 in installing a municipal gas plant, and all of the bonds issued for this plant are still unpaid. Ex-inspector Meissner, who was also president of the board of aldermen, testified as follows:

"That over one-half of the plant was not in the proper condition to operate, owing to defective workmanship, and incompetent help, at the time the pipes were laid. When the pipe liners laid the pipe through the city fields they did it without the aid of a topographical map of the country. They went across streams and ravines without making drips, and when the line became defective there were no drips to strengthen it. In the mean time, the engineer had been discharged, and new ones hired, who knew nothing of the work of their predecessors, as no maps were made. Many obstructions were left in the pipe by the employes. When they stopped work at night they would leave their tools in the line, and forget all about them in the morning. The work would be continued with the tools in the line. One-third of the labor on this project was thrown away. I remember that four barrels of water were taken from a four-inch line. This was due to incompetent labor and leaky joints. I saw this, but had no authority to correct it. I know of leases made by the city in territory that the Northwestern would not touch. The city took the leases, and if a gasser was struck the owner was paid for it at the rate of a million feet. That was when wells were measured by the million; now a 700,000-foot well is a hummer.

"If an oiler was struck, the city gave it up, and had no oil rights; the owner paid the expense of drilling the well and let it go at that. The way in which the well would be worked, when the city was to buy, was something after this manner: They would cap the well until it showed a pressure of 750 pounds to the square inch, which would be a two or three million foot well. It would be measured, and the city would pay for it at that rate. After two weeks it would not be good for 700 cubic feet, and sometimes the wells would peter out in three or four days. Many people drilled wells and the city bought them, and the drillers did not care whether the wells were any good or not, so long as they got their pay. The trustees hired incompetent persons in important positions. A man was employed to secure leases, and go from house to house to canvass for subscribers. Very soon he bobbed up as an oil contractor, and is now working in the field for the city. Where did he get his capital? Every month the reports of the trustees show so much paid to him for drilling wells. That is where the leaks in the department come in.

"There is a man in the city's employ now, and is drawing a salary of over $2,000, who was employed at one time by R. W. Smith & Company. He told me that Smith used to figure on laying pipe for the city, and would make specifications at about 20 per cent profit above estimated cost of materials and labor, and would then add 20 per cent for contingencies. The trustees would make contracts at these prices, and the lines would be laid, and 25 per cent of the material was never used. The city hired a man to go from house to house and induce subscribers to change from the Northwestern to the city line; if they did not do it they were branded as not patriotic. I know of cases where the changes in plumbing made necessary by the change were paid by the city, and the subscriber has not paid enough revenue to make good the plumber's

bills." This is the way business is managed under municipal ownership, and then the claim is made that, with such management, they can furnish lights cheaper than private companies.

City Accountant Whittlesley prepared a statement showing that the operating expenses for four years have exceeded the total income by $24,328.50. When it became evident that municipal ownership was a failure, the mayor conceived the plan of leasing the works to his syndicate. Under this plan the mayor was to turn over to the syndicate the entire property of the municipal plant, the syndicate were to erect a plant for the manufacture of gas, they having the right to sell any and all of said city plant, as they might find necessary or desirable. The entire proceeds from the sale of gas, and all moneys, to be paid to this syndicate, and expended by them as they thought proper. The syndicate should have the right to conduct the business as they pleased, expend any amount of money they thought proper in installing the plant, pay whatever exorbitant salaries they pleased, employ any number of men in the business; in fact, have the most complete monopoly of the business until the profits amounted to enough to pay back to them all of the principal they had invested, with five per cent semi-annual interest and all expenses of operation. That is, Mayor Jones patriotic syndicate would run the business until the plant was practically worn out; then the city could have it by paying them for the entire outlay and expenses, with five per cent interest for the full time. The city must pay what the entire business cost when new, and take an old worn out affair.

The aldermen did not appreciate this generous offer, and rejected it. Then it was decided to sell the plant outright. The mayor claimed that the plant, which had cost $1,250,000, was now worth $500,000, but when the bids were opened it was found that the Jones syndicate had offered $300,000 for it. It was stated that the object of this syndicate was to protect the interest of the tax payers. That is, the property that cost $1,250,000, and which it was claimed was now worth $500,000, they would buy for $300,000, so as to protect the city's interest. If the property was worth $500,000, why did not this syndicate, if they wish to protect the city, bid that amount, instead of $300,000? The mayor says you cannot make a contract but some lawyer could drive through it with a horse and wagon. If this is the case, would not the contract referred to above, made and offered to the city by this syndicate for leasing the plant, be in the same condition, and would it not be the syndicate's lawyer who would drive the horse and wagon? The plant cost $1,250,000; add interest and taxes lost, together with the loss in operating it, during the past four years, of $24,328.50, and we have over two millions, not including the loss in operating previous to 1895. After only ten years' use, the highest bid they could get for this property was $300,000, making a net loss to the tax payers of $1,700,000 in ten years.

After such an experience and loss as this, with the fraud and swindling disclosed in the testimony of the president of the board, the gas trustees, composed of three men, while the council had the business in hand and were considering what action better be taken to protect the

city, inaugurated and secretly carried through at a star chamber session a contract that, under the circumstances, has no parallel in this country in its infringement upon the rights of tax payers. If this contract was for the best interest of the city, why was it not made public and the 150,000 citizens of Toledo allowed an opportunity to examine and discuss it? Instead of this it was rushed through secretly for the very purpose of defeating any action or examination on the part of tax payers.

Here we have an example of what can and will be done by advocates of municipal ownership when they are given the control of public business. The gas trustees evidently adopted the same system as was used by the gas ring in Philadelphia, regardless of the public's rights. This syndicate, by this contract, are to furnish fuel gas of 500 heat unites at their station, to be measured there with a meter. It is then to be conveyed into the pipes belonging to the city, which not only the mayor, but other prominent citizens have testified are of no value, and that one-half of them are in such a condition that the gas flows into the ground and streams in such quantities that it causes bubbles to be blown in the water. This loss must be borne by the city. They must also make all repairs, pay for all piping, light and extinguish all lamps; in fact, assume the entire expense of the business except manufacturing the gas at the station. Not only that, but they bind the city to furnish customers for this syndicate. The syndicate have about as fat a job as could be desired, and this contract is for ten years, thus giving them an absolute monopoly for that time. Here is a star-chamber contract that the syndicate's lawyer, if he desires, can drive a four-horse team through without friction.

The average leakage in gas pipes, when they are in good condition, is about twelve per cent, and the heavier the pressure at the works the more leakage. With pipes in such condition as shown at Toledo, the loss must exceed fifty per cent.

It is for the interest of the syndicate to carry as high a pressure as possible, because they are paid for every thousand feet that the meter registers at their station, and meters are never tired.

BY THE HON. GUY G. MAJOR, MAYOR.

Our city has had a rather dear experience trying to furnish our citizens gas.

The state legislature, some six years ago, passed an enabling act, authorizing a bond issue of $750,000, same to be used for gas purposes. Before the bonds were issued or the money expended, the proposition was submitted to a vote of the people—sixty-three per cent favored the expenditure. The entire amount was expended, then certificates of indebtedness were issued for $600,000, afterward unpaid bills amounting to about $360,000, that were paid by general refunding twenty-five-year four per cent bonds. The gas line has not paid interest or principal, and is to-day losing about $2,500 per month.

It is my opinion that the plant would not sell for $150,000 to-day, as

it is built of wrought iron, and the life of wrought iron pipe in the ground is not over six or eight years.

Our city made an experiment similar to this in 1872, built a system of water works that cost $1,000,000, issued eight per cent bonds. These bonds were refunded in 1893 and 1894 at four and one-half and five per cent.

During the twenty years the water works department did not pay a dollar of its principal or interest.

Personally, under our form of government, I do not believe municipalities should engage in business, the above being examples why they should not.

PUBLIC OWNERSHIP VIVISECTED.

BY EDWARD WISNER.

Toledo is a city of nearly 150,000 people, the equal in intelligence and enterprise of any similar community in the world It is a city of beautiful homes and thriving industry, the second railway center in the world, and situated to command a large share of the commerce of the unsalted seas. In no city in this country are the masses better clothed, better fed and better housed.

Toledo has had some experiences in owning public utilities, and the balance sheet is interesting reading at this time.

Toledo built what is known as the Woodville railroad.

It cost $448,000. The city sold it to the Pennsylvania Railroad Company for $225,000, or $223,000 less than it cost. The city borrowed $432,000 of the original cost and gave her bonds bearing 7 3-10 per cent, payable in thirty years. The bonds will become due next year. When due the city will have paid $946,080 in interest, and principal will have to be carried along until the present generation shall have bequeathed to posterity both the debt and municipal problems.

Toledo owns a natural gas outfit, consisting of pipe line, gas leases, etc.

The city borrowed $1,500,000 to go into the gas business. This enterprise has paid $100,000 gross to the city, but not one cent of interest, which is running at the rate of $67,500 per annum. By the time the natural gas bonds are due the city will have paid over a half million dollars in interest in excess of the $100,000 received, and will leave its tax payers burdened with the original debt of $1,500,000.

The value of the natural gas plant is the subject of much discussion at the present time. The city has recently refused a cash offer of $256,000 for it, and has entered into a contract with a New York syndicate for the manufacture of fuel gas to supplement the natural gas supply, agreeing to pay twenty cents per thousand up to 2,000,000 cubic feet per day ; when the gas taken exceeds that amount the price is to be 18 cents. The city reserves the right to buy the supplementary gas plant to be erected by the syndicate at any time after two years, capitalized on a five per cent net earning basis, but not to exceed $250,000 for a plant

capable of making 3,000,000 feet of gas per day. In any event the natural gas experiment has been a costly one.

It is only fair to state that the advocates of municipal ownership excuse this failure on the ground that the natural gas supply became exhausted or nearly so—a disaster which no foresight could provide against. It should also be stated that a competitor under private ownership, occupying the same field has made the business profitable and is still paying dividends, thus demonstrating the superiority of private business management over public management.

It is a well-known fact, and one which will hardly be disputed, that what is done by the government now is done wastefully, and it is possible for the government to conduct its business as it does only because through its taxing form it commands the profits of all the productive industry of the country. The postoffice department, which is so often held up to us as a fine example of government business ability is able to run only because it has the United States treasury back of it; as a business proposition it loses directly about $40,000 per day every day in the year—indirectly it undoubtedly loses as much more. From a business standpoint there should be considered interest on its plant, which would swell the deficit enormously. There should be charged a large sum annually for depreciation, repairs, and renewals of public buildings; at present no charge is made to the post office department for janitor service, heat and light in the government buildings, these expenses being charged to the treasury department. If everything were charged to the postoffice department, which is a legitimate business expense, it would undoubtedly double the direct deficit, making a net business loss of approximately $80,000 per day—a sum which for the year equals the total average wealth of nearly 30,000 American citizens; in other words, the accumulated savings of nearly 30,000 average Americans are required every year to make good the losses sustained in the admittedly best conducted business enterprise in which the government is engaged, and this amount has to be supplied by forced contributions from the people of the United States, who know enough to conduct their business on business principles. It must, of course, be admitted that the benefits of the postal system are ample compensation for all it costs the people in the way of government taxation to make up deficits. But while the people are able to pay the losses sustained in the conduct of the most economically run department of its government, it need hardly be stated that were all productive industry run as socialism would have it, by the government and all of it run as the best of it now is, it would be only a short run to bankruptcy of both government and people. It is a fact notorious and beyond dispute that in pretty much all the ordinary business transactions the government gets woefully swindled. It pays more for any piece of land it may happen to want than individuals or corporations pay under similar circumstances. It pays $125 a head for mules and sells them a few months afterward for $40 or $50 per head. Any wholesale grocer who would do business on the same plan that the commissary department does would be bankrupt in less than a month. The possession

of a government contract is looked upon as a bonanza, because from a business standpoint the pay for property or service furnished is both sure and liberal. Indeed, so universal is the rule that it will be generally admitted without either argument or citation of example. Nobody will contend that municipal government fares any better from a business standpoint than does the general government. The exhibit of Toledo's business transaction, made in another place, and the experience of every large city between the two oceans, are but an illustration of how municipalities conduct business.

If you had an agent conducting a part of your business, and that agent had uniformly been expensive, profligate and corrupt, what would you think of a proposition to turn over to him conduct of all your business affairs, and to place your fortunes in his keeping. Your answer must be that such a thing would be preposterous. But that is exactly the proposition of the socialist. The state and municipality necessarily have to conduct some business, but such business has always been done with an expense and extravagance which would mean hopeless bankruptcy were all business so conducted. Common sense and common prudence require a positive "no" to the demands of the socialist.

BUSINESS BY POLITICIANS.

Under our form of government the business of municipalities and the state is in the hands of the politician. Our political system has developed the boss. New York city furnishes perhaps the best example of boss rule, because New York has the greatest municipal business to conduct, and while other communities are not bled to the same extent, yet through the entire country may be found a similar rule of the political dictator, each community in proportion to the business and revenues to be handled.

Richard Croker, the Tammany chief, who is practically king of our metropolis, began the bossing business a poor man, and without any visible means of making even a decent living, he has become immensely wealthy. It is a fact notorious that every legitimate business which wants fair treatment must put up cold cash, a part of which finds its way to the boss' pocket. Illegitimate business which wants protection and license must divide the spoils with Croker; every man who wants an office or a contract with the city must "see" Croker or his agents, and make his peace by use of the long green.

It will be said in offset that in New York affairs are worse managed than in other places, which may be true, but everybody who knows anything about government affairs knows that everywhere is the man with a "pull," and that the difference between New York and other places is a matter of degree only.

Business conduct of great enterprise by the state is nothing new and we have abundant example in this country.

The state of Michigan built the Michigan Central railroad from Detroit to Kalamazoo at a cost of $2,500,000 and sold it for $2,000,000, and that is one of the brightest examples of railroad building by the

state in this country. Illinois built fifty-eight miles of railroad from Mendosia to Springfield, at a cost of $1,000,000 and sold it for $21,000. Illinois' experience in the railroad business cost her $6,000,000. Massachusetts sunk $14,000,000 in the same line. The state of Pennsylvania built and operated what was known as the Allegheny Portage railroad. While operating it the running expenses amounted to $3,161,000, and its gross receipts to only $2,985,000. In "Railways and Republic," by J. F. Hudson, may be found the following:

The canals and railways built by that state (Pennsylvania) and operated by it for nearly twenty years, are well known as an illustration of the evils of political management in business enterprises. They are salient examples of the demoralizing effect which politics and public works can exert on each other; and the constant strife for their patronage, its use for political rewards, and the expensive administration and unsatisfactory revenues of the roads finally led the state to part with them.

It is not necessary to inquire why men will not do business for the public as economically as they will for themselves. The fact that they do not is sufficient. Even that great reformer and advocate of socialism, Hazen S. Pingree, now governor of Michigan, falls down when the test is applied. As mayor of Detroit in 1897, in a special message to the council, he made this statement:

"It is well known that the total amount of money invested in street railways in the city of Detroit is not more than $5,000,000."

And yet this same Hazen S. Pingree is trying to buy this same street railway for the city of Detroit, and is willing to have the city pay $17,500,000 for it. He would hardly buy it for himself at that price.

TAUNTON, Mass., plant, $145,301; have 1,200 candle power lamps, and, as stated by the Gas and Electric Light Commissioners, cost $73.12 per year, burned 2,144 hours, costing .034 per hour, and furnishing 352 candle power per hour for one cent.

TITUSVILLE, Pa., plant, $16,320; natural gas; operating expenses, $4,756.38; interest at five per cent, $816; depreciation, $816; taxes and insurance, $160; making $6,548.38, cost of street lights burned 3,500 hours, costing .0157 per hour, and furnishing 1,273 candle power per hour for one cent.

TOPEKA, Kan., plant, $76,434.85; coal, $2 per ton; operating expenses, $10,484.60; interest at five per cent, $3,820.74; depreciation, $3,820.74; taxes and insurance, $764; making $18,900.08, cost of street lights burned 2,000 hours, costing .0335 per hour, and furnishing 597 candle power per hour for one cent.

TARENTUM, Pa., plant, $32,000; coal, $1.50 per ton; operating expenses, $7,000; interest at five per cent, $1,600; depreciation, $1,600; taxes and insurance, $300; sinking fund to pay bonds, $1,000; making

$11,500, less income, $5,000, and we have $6,500, as cost of street lights burned 4,000 hours, costing .0239 per hour, and furnishing 502 candle power per hour for one cent.

VINTON, Iowa, plant, $20,000; coal, $1.88 per ton; operating expenses, $4,000; interest at five per cent, $1,000; depreciation, $1,000; taxes and insurance, $200; sinking fund to pay bonds, $320; making $6,520, less income, $4,300, and we have $2,220, as cost of street lights burned 1,800 hours, costing .0286 per hour, and furnishing 409 candle power per hour for one cent.

WHEELING, W. Va., plant, $125,000; coal, $1.09 per ton; operating expenses, $22,110.64; interest at six per cent, $7,500; depreciation, $6,250; taxes and insurance, $1,250; sinking fund to pay bonds, $8,000; making $45,110.64, cost of street lights burned 4,000 hours, costing .0225 per hour, and furnishing 800 candle power per hour for one cent.

WESTFIELD, N. Y., plant, $13,000; coal, $2.10 per ton; operating expenses, $2,000; interest at four per cent, $520; depreciation, $650; taxes and insurance, $130; sinking fund to pay bonds, $600; making $6,100, less income, $2,000, and we have $4,100, as cost of street lights burned 3,120 hours, costing .0164 per hour, and furnishing 1,219 candle power per hour for one cent.

WASECA, Minn., plant, $20,000; coal, $2.85 per ton; operating expenses, $4,875; interest at six per cent, $1,200; depreciation, $1,000; taxes and insurance, $200; sinking fund to pay bonds, $750; making $8,125, less income, $5,130, and we have $2,894, as cost of street lights burned 1,500 hours, costing .0507 per hour, and furnishing 394 candle power per hour for one cent.

WAKEFIELD, Mass., plant, $187,500; use 1,200 candle power lamps and cost, as made by the Gas and Electric Light Commissioners, $83.30 per year, burned 1,365 hours, costing .06 per hour, and furnishing 200 candle power per hour for one cent.

WELLSTON, Ohio, plant, $30,000; coal, 80 cents per ton; operating expenses, $4,600; interest at six per cent, $1,800; depreciation, $1,500; taxes and insurance, $300; making $8,200, less income, $4,000, and we have $4,200, cost of street lights burned 2,000 hours, costing .0318 per hour, and furnishing 377 candle power per hour for one cent.

WELLS RIVER, Vt., plant, $15,000; water power; operating expenses, $500; interest at four per cent, $600; depreciation, $750; taxes and insurance, $100; sinking fund to pay bonds, $750; making $2,700, less income, $1,143, and we have $1,557, cost of street lights burned 2,000 hours, and costing $24.71 per lamp per year for incandescent lights.

WINTERSET, Iowa, plant, $20,000; operating expenses, $4,000; interest at four per cent, $800; depreciation, $1,000; taxes and insurance, $200; sinking fund to pay bonds, $900; making $6,900, less income, $5,000, and we have $1,900, cost of street lights burned 1,400 hours, costing .0335 per hour, and furnishing 358 candle power per hour for one cent.

WATERVLIET, N. Y., plant, $34,000; operating expenses, $8,000; interest at four per cent, $1,360; depreciation, $1,700; taxes and insurance, $340; making $11,400, cost of street lights burned 4,000 hours, costing .0247 per hour, and furnishing 809 candle power per hour for one cent.

WILMINGTON, Ohio, plant, $30,000; they report that the entire cost of lights per year, including interest and depreciation, is $3,200.

An examination shows a pay roll of $2,200; interest at four per cent, $1,200; depreciation, $1,500; fuel, $1,500; making $6,420 per year, not including carbons, repairs, oil, waste, renewals or taxes.

WAPAKONETA, Ohio, plant, $31,000; coal, $2.15 per ton; operating expenses, $5,134.08; interest paid, as given by city clerk, $1,820; depreciation, $1,550; taxes and water rent, $310; sinking fund to pay bonds, $950; making $9,764.08, less income from private consumers, $4,740.74, and we have $5,023.34, cost of 69 street lights, being $72.80 per lamp per year, burned 2,200 hours, costing .033 per hour, and furnishing 606 candle power per hour for one cent.

YPSILANTI, Mich., plant, $25,000; water power; operating expenses, $3,000; interest at four per cent, $1,000; depreciation, $1,250; taxes and insurance, $250; making a total of $5,500, cost of street lights burned 1,900 hours, costing .0273 per hour, and furnishing 732 candle power per hour for one cent.

CRAWFORDVILLE, Ind., plant, $105,000; operating expenses, $16,936.22; interest at four per cent, $4,200; depreciation, $5,250; taxes, $1,000; making $27,386, less all income, including $240 for lighting city buildings and lamps sold, $10,697.00, and we have $16,689, being $115.89 per lamp per year, burned on moonlight schedule to 1 A. M., costing .0526 per hour, and furnishing 380 candle power per hour for one cent.

The above figures, except depreciation and taxes, are the same as given in the superintendent's report to the city council for year ending May 31, 1900.

In their construction account is an item of $12,000 for free wiring.

See also page 74.

LEGAL AND OFFICIAL OPINIONS FROM SOME OF THE MOST PROMINENT MEN IN THE NATION.

JUDGE COOLEY, Interstate Commerce Commissioner, says: "There seems, therefore, to be strong, if not controlling reasons, whenever the supply of a public convenience can assume the form of a private and continuous business, for permitting it to take that form and for granting to individuals the necessary franchise for the purpose."

He further says, "That this species of legislation has been exceedingly mischievous in its results, that it has created a great burden of public debt on which, in a large number of cases, the anticipated benefit was never received, and that, as is likely to be the case where municipal governments take part in projects foreign to the purposes of their creation, it has furnished unusual facilities for fraud and public plunder, and led almost, at last, to discontent, sometimes even to disorder and violence."

Ex-GOV. RUSSELL of Massachusetts voiced the people when he stated before a committee, "That the matter involves a most serious question of public policy, namely, whether it is wise, necessary and safe to reverse the policy that has governed towns and cities for 250 years and allow them to go into these enterprises with all the hazards, risks, and liabilities that attend the investment of money in private industry. I am one of those who believe that it is the duty of government not to crush out individual enterprise and energy, but to aid it. I believe in the principle of government helping men to make the most of themselves, and industries to make the most of themselves, but not in a paternal government to which we must all look for leave to act, or think, or speak. And I believe, on that principle, it is of doubtful expediency for a state or government to undertake to control, in this way, private enterprises."

MR. IVINS says: "It is because we fear our army of office-holders that conservative men look upon the paternal and regulating tendency of goverment with undisguised dread."

W. T. BURT of Wheeling, West Va., a city which has run its gas plant since 1870, says: "Owing to politics our city has not been successful in getting good, competent public servants. Unfortunately, our civil service is not separate from politics."

JOHN MITCHELL of Richmond, a member of the board of aldermen of that city, says: "All positions are filled by the spoils system. Republicans rigidly excluded."

W. W. COOK of the New York Bar, says: "If our large cities should manage their natural monopolies their governments would become El Doradoes of political freeboters and mountebanks."

HON. SETH LOWE, ex-mayor of Brooklyn and president of Columbia College, says: "Few American cities have exercised so great a competency in the business already in their hands as to justify a very strong presumption that they would manage lighting works."

PROF. GRAY says: "It is beyond any doubt whatever, much more in harmony with the theory and philosophy of democratic government than municipal ownership."

PROF. WHITNEY says: "That an engineer loses his professional dignity and standing by entering the service of a city. Every new position placed at the disposal of the city officials tightens the grasp of the 'ring boss' upon the treasury of the city."

PROF. ASHLEY of Harvard University, who was at Toronto at the time the changes were made in their municipal management, says: "I am thoroughly in favor of private management. I came to this opinion after four years' experience of Toronto city government, starting originally with a very strong leaning toward municipal management."

PROF. ROSEWATER of Columbia College, says: "If we turn now to the cost statistics of electric lighting under municipal ownership of the plant, we strike a complication no less serious. At the very beginning of every such investigation we find ourselves in the chaos of American municipal bookkeeping. When two cities employ the same system of accounts, when in the same cities the reports of the different departments furnish irreconcilable data, the statistican must seek to extricate himself as best he can. It would scarcely be stating the case too strongly if you should say that out of the probable 150 municipalities owning their own electric lighting plants, not five could present an intelligible showing of their operation for the period of one year. The blame for this does not attach entirely to the city officials, for conditions exist in many localities which render a clear financial account a thing next to an impossibility.

PRES. HOPKINS of the National Street Lighting Association is opposed to the municipal ownership of electric light plants. And this conclusion has been reached, he says, after years of careful study of the comparative merits presented by the operation of public service systems by private contract and by municipalities, and from a comparison of statistics of relative economy and efficiency col-

lated from all the larger cities of the country. Mr. Hopkins said if politics could be eliminated from the proposition of municipal ownership, it might prove to be a desirable system of supplying public service, but as long as politics is permitted to enter into the administration of public service, there is little to be gained in placing expensive electric, gas or water plants in the hands of untutored and inexperienced politicians.

Mr. Hopkins is strongly opposed to the municipal ownership of electric light plants, or gas plants either for that matter.

"When I first became interested in city lighting," he said, "I was enthusiastic over municipal light plants, and especially over municipal electric light plants. I thought it was the only way a city should be lighted. I have devoted several years since then to the collection of statistics, and have made a very careful and exhaustive study of the question. And as a result I have come to the conclusion that there is nothing whatever in it.

"Politicians do not make good electricians, and I regret to say this country is not yet ready for municipal electric light plants.

"Now you tell me you have an ordinance pending before your council now for the erection of a municipal electric light plant. Well, in the first place, if the ordinance is passed you will have to issue $200,000 or $300,000 bonds. This is just that much property taken from the tax duplicate, for if the plant were not erected by the city it would be erected by private capital and, of course, it would be taxable. Then there is the interest on these bonds, in itself a large item. So you start out with two very burdensome losses.

"But the most important consideration of the municipal ownership of electric light plants is that by the time the bonds issued for the erection of the plant are paid, the machinery and apparatus, always expensive, are totally out of date. Electricity is making rapid strides, and a plant that was modern ten years ago is long since out of date now. And what is the result? The plant that cost $300,000 to build ten years ago is little better in comparison with modern equipment than a pile of rubbish.

"But the most serious objection to municipal ownership at this time is the fact that all municipal service plants are controlled by politics. As I said before, politicians or ward heelers do not make good electricians. You cannot get the best electricians to run municipal electric light plants, when political pulls are the accepted recommendation. Then again, there are so many changes in administrations, that it would be almost impossible to keep good men in charge, if they were to be secured. A ward heeler has no business handling expensive electrical machinery, when the mere turning of a switch the wrong way would entail the loss of thousands of dollars. There may come a time when municipal ownership may be profitably established, with politics eliminated, but the country is not ready for it yet, and, therefore, I am opposed to it now."

HON. CARROLL D. WRIGHT, Commissioner of Labor, at the meeting of the American Economic Association, in the discussion of municipal ownership, gave the true facts regarding the so-called investigations and reports of committees and mayors of various cities.

He said, "That whenever in an American city the question of municipal or private ownership had come before the people the first practical step taken had been the appointment of a junketing committee of inquiry to investigate the methods and results of competing systems in other cities, and that such committees, beginning their studies in ignorance, had completed them in confusion of mind a thousand-fold worse than the original ignorance."

MR. GREENOUGH confirmed this statement, and explained that the success of the Massachusetts Commission, in obtaining exact and truthful balance sheets, is due to the immunity from unnecessary competition and from blackmailing raids which existing companies enjoy under the protection of the commission, in return for the publicity and regulation of charges which the commission forces upon them.

SENATOR LOUD, chairman of Commission on Postoffices, says: "It is an incontestible fact that the government cannot conduct any line of business as economically as an individual or a corporation can."

DECISION OF THE SUPREME COURT OF MASSACHUSETTS.

In this opinion Justices Field, Allen, Knowlton, Morton and Lathrop, say: "We are not aware of any necessity why cities and towns should undertake this form of business any more than many others which have always been conducted by private enterprise, and we are not called upon to consider what extraordinary powers the commonwealth may exercise or may authorize cities and towns to exercise in extraordinary exigencies for the safety of the state or the welfare of the inhabitants. If there be any advantage to the inhabitants in buying and selling coal and wood for fuel at the risk of the community, on a large scale, and on what has been called the co-operative plan, we are of the opinion that the constitution does not contemplate this as one of the ends for which the government was established, or as a public service for which cities and towns may be authorized to tax their inhabitants."

JUSTICE WILDE of the supreme court of Massachusetts said: "The limitation upon the power and authority of towns to enter into contracts and stipulations is a wise and salutary provision of laws, not only as it protects the rights and interests of the majority of the legal voters, but as it may not infrequently prove beneficial to the interests of the majority, who may be hurried into rash and unprofitable speculations by some popular and delusive excitement, to the influence of which even wise and considerate men are sometimes liable."

DR. A. T. HADLEY, president of Yale University, on public and private ownership, says: "To those who look at the subject superficially it sometimes seems as though private enterprise meant management of industry by the few for the few, state control management by the few, but for the people, and direct state ownership management by the people and for the people. This view of the matter is urged by many who are anxious for a change in the direction of increased state activity. However, it can be readily shown to be in many respects fallacious.

"In the first place, whatever system is adopted, the management will be in the hands of the few. * * * * * * The legislature, as at present constituted, is elected for purposes other than the control of industrial enterprise, and that this combination of functions affords manifold opportunities for misunderstanding and corruption. Control of officials by the ballot has the disadvantage that the responsibility is remote. Elections occur at such infrequent intervals that there is an opportunity for the perpetuation of many serious abuses before they can be checked. It is also true when parties have been frequently changed that it is difficult to fix on the officials of one party rather than another the responsibility for any particular stage of industrial affairs. Finally, even in the best managed government, there is danger that there will be a good deal of politics in the selection of administrative officials."

R. P. PORTER, on municipal ownership in England, says: "No wonder the tax payers and commercial bodies of England are up in arms against a scheme for the suppression of fair dealing by the unlimited enlargement of the functions of government. The nearest approach to this organization which we have in the United States, is, at the present moment, advocating the repeal of the wise constitutional provisions in so many state constitutions which limit the creation of debt. Ruffled by these wise provisions in their attempt to bring about the British condition of affairs in the United States, the American advocates of municipal trading have discovered that this obstacle must be removed before municipilization of profit-making industry is possible. While, therefore, the form the question is taking in the United States is a little different, the object sought to be attained is precisely the same.

"These are some of the specific charges which will be made during the next session of parliament against what the English call municipal trading, but which we exploit under the term municipal ownership. The general charges are equally worth considering, and should start those advocating these schemes for the United States thinking. These charges completely dispose of the four stock arguments of the municipal ownership advocates in the United States, which are, as is as well known, (*a*) that municipalities can borrow more cheaply than private individuals; (*b*) that, if a profit can be made out of the general supply of some commodity for the community, why should not the community realize that profit for itself; (*c*) that the motives of private adventure are self-seeking and sordid, and contrast unfavorably with the disinterestedness of the city aldermen (New York, Philadelphia, and Chicago, for example);

(*d*) that some of these enterprises are in the nature of monopolies, and that it is better that the government should be a monopolist than a private person. To this case of the municipal trader, which I have put in a nut shell, the English opponent of municipal socialism aptly and vigorously replies, sustaining his opinion with an array of data that confounds the college professor and socialistic clergymen who have rushed madly into the municipal ownership arena, and want our cities to absorb alike all the lighting and street railway enterprises."

E. KIBLER, member of Ohio Commission, says: "It seems to me that the great barrier to good municipal government in the United States is the almost complete domination of the machinery of municipal government by partisan politics, and the prevalance of that almost criminal idea that city government is the legitimate spoils of party politics. The contest has become to be, not which man will best serve the public interests, but, rather, which set of politicians shall gain the right to distribute the fruits of municipal government among its party zealots.

"For some reason or other, the people generally have very little of abiding interest in municipal affairs. They find themselves practically unable to participitate in the nomination of candidates for municipal offices; compelled to vote for candidates who represent, merely, party politics, and not, in any sense, the popular choice; except upon conditions to which they are unwilling to submit, they find themselves unable to obtain official positions, or have their qualifications receive even quasi consideration, and they look upon municipal affairs in general as the exclusive property of the politician, as the natural monopoly of partisan politics, and there is a feeling, more or less vague, that there is a moral taint in enlisting in a contest for place.

"Can anybody conceive of a good reason why there should be any party nominations or party candidates for any municipal office, or the pertinence of any inquiry as to the opinions entertained upon subjects of national politics by a candidate for mayor or the city council?"

H. L. DOHERTY, says: "One of my political friends once wrote me as follows:

"'They (the people) want it, and I am on record as favoring it. I am no longer so sure I am right, but there are other reforms that I know I am right about. Were I to experience a change of heart on this question it would remove all chances of my election, and would elect my opponent, who knows less about this subject than I, and who has but this one plan in mind.

"'No matter what my personal views may be, my election will make me their servant.'

"A majority of them (city officials) already know that municipal ownership is a rank fallacy, but they are too wise to express views contrary to the people they must look to for re-election. By championing these views even though they know them to be wrong, offers an easy road to office."

E. W. BLISS says: "Under municipal ownership and operation the tax payer takes all the risk. If street car patrons are promised lower fares, as a bribe for their votes, and cast votes enough to elect a mayor and a council pledged to fix a four cent, a three cent, or even a two cent fare, and the income from the fares fails to pay all costs of ownership and operation, tax payers must pay the loss. From this there is no escape. In but one way can tax payers take security against this inevitable catastrophe. They must see to it that the law granting power to the municipality to own and operate street railroads shall provide that they shall be controlled by a scientific system of regulation; that their accounts shall be kept as prescribed by the state, subject to state audit, and shall show the entire and true costs of ownership and operation; that the council shall not permit any free service, and that it shall not fix a rate of fare less than the true cost of the service, plus the annual requirement for a sinking fund to pay the bonds issued in behalf of the purchase of the property. If tax payers do not secure this safeguard for their protection when municipal ownership comes, the losses they will be compelled to pay will be a just penalty for their neglect of duty."

R. P. PORTER, who has recently returned from England, says: "The advocates of municipal ownership in the United States are threatened with a movement in England, which may knock the underpinning from their structure and bring down the edifice with a crash. The epidemic of municipal trading, and interference with private enterprise, may be arrested by a petition to parliament for a royal commission, or joint committee of parliament, to define the extent to which municipal trading shall be sanctioned by the legislature. The contention of a large and influential body of Englishmen, who have become thoroughly alarmed at the present situation, is that individual effort in England is being crushed and enterprise stifled by municipal interference; that, unless a vigorous opposition is organized against these encroachments of the municipality, the national consciousness will be stifled in the coils of the boa constrictor bureaucracy as effectually as it has been in Germany. The facts in relation to this important movement, which was only crystalized a few months ago, will come as a surprise to those in the United States who have accepted, without question, the conclusions of enthusiastic writers or half-baked economists in relation to the achievements of municipal trading in England. If only a part of the acts alleged as a basis for parliamentary action and a halt in this tendency to state omnipotence be true, the disillusioning is likely to be as complete as it will be sudden. The immediate cause for alarm and dissatisfaction on the part of tax payers is the increase of local indebtedness and taxation since the inauguration of municipal trading."

J. B. CAHOON says: "Municipalities have not conducted their bookkeeping, so far as their electric lighting plants, or even their water companies are concerned, on a strictly business basis, and have, therefore, omitted many charges that should have been made against the operation of the plant. For instance, municipal and state taxes in many

instances have been omitted entirely as a charge against the plant. Interest, in some cases that have come to my knowledge, has been omitted even, while few, if any, of the municipal plants charge anything to depreciation, and none of them, so far as I have been able to learn, has charged anything in the year's operating expenses against the provision for the retirement of bonds at maturity.

"Hence, in reporting the costs of operation, they are invariably reported very much below what the real cost is. Strict business methods must be applied to a municipal plant, just the same as to a private plant, otherwise you simply deceive yourself and place the burden of your mistake upon the future generation. During some eighteen years' experience in electrical matters, and for many of those years being so situated as to be able to get at the actual cost of operation, my experience tells that no municipality, however conscientiously they may try, can operate a plant as cheaply as a private corporation. The factors for economy are not with the municipal plant; the same incentive to economy is not there.

"In general, if you would compare the cost of the operation of a plant by a municipality and the operation by private parties, you must take into consideration these things: First, the cost of the materials consumed; second, salaries and wages; third, miscellaneous general expenses; fourth, insurance on property; fifth, employes' liability insurance; sixth, insurance against accidents to the public; seventh, municipal taxes, relinquished; eighth, state taxes, paid or relinquished; ninth, depreciation, at least five per cent on apparatus; tenth, provision for retiring bonds at maturity."

M. A. GUNUNDER, secretary Trustees of the Sinking Fund, Columbus, Ohio, upon municipal management, says: "Some years ago I had occasion to examine into some reports published by the state of Ohio as to the cost of making gas at the state's plant. Figures were published and spread broadcast, which were so low as to cause many a private corporation to squirm. I examined the plant itself, as well as the published reports. The most astonishing thing connected with the whole affair was the admission on the part of the superintendent that, for sometimes six months at a time, no records at all had been kept. The state possessed no station meter, or other meters to speak of, and about everything was guessed at. It was, therefore, no surprise to find the official report showing that the output exceeded the amount of gas made. With revolutions in the political wheel came, also, changes in superintendents. One of these complained, rather bitterly, as follows: 'Notwithstanding the fact that I expected to find the works in a bad condition, I certainly did not expect to find them in such a dilapidated state as I did. There were no retorts in the works fit for use; in fact, about everything had been exhausted, and nothing replaced that could possibly have been avoided; I suppose, in anticipation of a change in administration. I am satisfied that the expense of making the necessary repairs, and to enlarge sufficiently to meet all demands, would be equally as

much, if not more, than to build new works, with capacity to meet all requirements for years.' A further inspection shows that the lowest cost was reported by the superintendent who had let things go to ruin, and as soon as the works were in good condition, strange to say, the cost rose about 25 per cent. Evidently, no trustworthy invoices were taken."

ALLEN R. FOOTE, says: "Gentlemen temporarily responsible for the efficient management of public plants must feel an overwhelming sense of gratitude for the service rendered them by unscientific economists, who, having a theory to prove, never permit statistical accuracy to spoil their story.

"The most striking feature is the shown infallibility and the attested remarkable ability of those having charge of municipally owned and operated industries.

"By means of a system of unfair and unscientific statistical comparisons, these gentlemen are shown in every instance, in spite of the handicap of inexperience, lack of technical knowledge, want of direct personal interest, and the inflexibility of governmental management, to have obtained results which, if true, would at once cause every corporation manager to be consumed with envy. So convincingly is this proof presented, it can hardly fail to cause these gentlemanly municipal officials to ask themselves why they have been able to administer these particular public plants so much more efficiently than they have any other public trust?

"Why they have managed them so much more efficiently than similar private plants are managed by those who devote their entire time and the best energies of their lives to such management, and have their fortunes invested at the risk of their management?

"Why they have been able to manage public business so much more efficiently than they can manage their own private business?

"This evidence must cause all persons who have the ability to think analytically to ask why managers possessing such consumate ability are serving the public for little or no pay, while corporations are charged with paying enormous salaries for the management of similar industries and politicians are charged with being in business 'for what there is in it for them?'

"Politicians and communities who permit themselves to be guided by such evidence must in due time pay the inevitable penalty for actions based on error.

"A shade of doubt is cast over the infallibility of these professors by the admission by one that 'a criticism should therefore be made upon those cities which entered upon municipal electric lighting eight or ten years ago.' Why? Turn back and examine the literature of this subject written by these same professors eight or ten years ago and you will find that they were as certain then, as they are now, that municipal ownership and operation was a correct policy, that they were as impatient of delays then as now, and that the very cities they now criticise for adopting this policy then were induced to adopt it by their teachings. What

value can an intelligent person place on statistical comparisons which make and repeat the error of comparing a present reported cost with a contract price paid years ago, and ignoring the price at which the contract could have been renewed when the public plant was installed.

"Worse still, what statistical value can attach to an opinion that to compare present public cost with present private selling price is an error.

"What value can statistical results have, calculated by those who argue that the item of taxes may be omited altogether?

"What must be thought of the intelligence of statisticians who claim that where a city is accumulating a sinking fund, or is paying its debt to this amount annually, no additional provision is required for a depreciation fund? On having reckoned depreciation at say five per cent as part of the cost in a given year, both interest and depreciation must be reckoned the next year at only 95 per cent of the value of the plant the year before.

"A sinking fund is for the purpose of replacing the capital invested, obtained from other sources, with capital obtained from another source.

"A depreciation is for the purpose of insuring an investment against impairment.

"To represent that a dollar paid into one fund makes the placing of a dollar in the other fund unnecessary, or that a dollar paid into depreciation fund reduces the investment account, is a mistake so simple and glaring it cannot fail to place those responsible for it under the burden of voluntary error."

AN INSOLVENT UTOPIA.

BY GUILD A. COPELAND.

It was only two years ago that Mayor Josiah Quincy began in Boston his experiments that were so widely described, at the time, in the American press. He aimed to build up a model city government, whose employes should themselves do the work that in other cities is done by contract or through private firms. So Boston was not content merely to have departments for building, cleaning, or repairing streets or water systems or sewers. Its stationery and printing work was turned out by one city bureau. Another bureau was established for carpenter work, repair work of various kinds on the public buildings, and even for electrical construction and repair. An ice plant was established for cutting and storing ice to be used in the drinking fountains. Veterinary bureaus were devised to look after the horses used in city work. Of course the horses themselves were bought for the city. Wheelwrights, blacksmiths, painters and letterers, and a whole army of labor came into the city's employ.

This was, in effect, the nearest approach to the development of the "municipal ownership" idea ever seen in any American municipality. It was a modified form of socialism, and at the outset it won high praise. The city was to save the money heretofore paid in middlemen's or corporation's profits, and was not to allow greedy contractors to wring dishonest profits from the municipal treasury. The painful announcement that the whole scheme is now discredited, and is a subject for popular ridicule, may cause some sorrow among those municipal statesmen elsewhere who have been so strongly on the side of "municipal ownership," as a theory which might save American cities from present evils.

The knowledge of the failure of the schemes for dispensing with the services of greedy corporations or contractors has come rather suddenly upon Boston. An old Boston business man and banker, T. N. Hart, was elected mayor last December, and began his term on New Year's day. Soon afterward he was asked to sign some vouchers for city work, and was struck by the estimates of cost of material and labor. He saw that they were far above the current rates, and he began to make a quiet investigation. The result has been that one after another of these much-heralded and much-lauded city bureaus has been closed up, as hopelessly extravagant.

From the statement of a skilled workman who held a high place in one of these bureaus, but was powerless to do much in the way of correcting abuses, a few figures are worth quoting. Reckoning up the cost of material at the current quotations, and the probable cost of labor necessary to do the work under the supervision of any reliable contractor or business house in Boston, he found that a job of electrical equipment on the ferry boats operated by the city should have cost $6,800. As a matter of record, it actually cost $10,200. The electrical work on a city building for hospital nurses should have cost $1,528. It really cost $4,754. The work on a city armory should have cost less than $2,600, but the city had to pay nearly $6,700 for the job. Some work on a public school, estimated as likely to cost $1,471 if done under contract, cost the city about $3,600.

Meanwhile, investigations were being pushed in other directions. The city's ice plant made an inviting field. After the statisticians had finished figuring on that public spirited enterprise, it was found that the ice used by the water department in the drinking fountains cost about $60 a ton, when it might have been bought from the local ice companies for $2 or $3 a ton. Orders were immediately given to get rid of the ice plant at the best possible terms, lest the outlay thus created might weaken Boston's credit if the plant should be in operation much longer. If a customer could have been found for the municipal printing plant, that, too, might have been unloaded at once. Some investigations into the cost of the operation of the plant indicated that outside parties would have done its work at least twenty-five per cent below the prices actually charged, and would certainly have done much better work.

Thus, in one bureau after another, practically the same situation was found. Instead of saving money by doing all kinds of city work

directly by city employes, the city has been brought into debt tremendously; so that to-day the debt is over four times the limit fixed by the state legislature, the excess having been borrowed under special legislative acts. The interest on this debt, with sinking fund payments, now amounts to more than the entire amount annually raised by taxation for all city purposes, outside of the school expenditure.

It is worth notice that amid all these revelations, which have stunned Boston, there is no charge of any such dishonesty as would call for legal proceedings. There has been no embezzlement of money. The sums expended are covered by proper vouchers, stored in the municipal records. That there was wasteful and extravagant folly is certain, but the crime is not one covered by the statutes of the commonwealth. The failure of the experiment was due to political interference.

The reason why it cost anywhere from twenty-five to fifty per cent more for Boston to do its own work than an outside business firm would have charged for that work, is to be found in the fact that the pay rolls of the different bureaus were absolutely loaded down with political appointees. The heads of the bureaus had to submit to this for self-evident reasons. The appropriations for their work were fixed by the city council. If an alderman asked to have a friend appointed, and the request was not granted, that alderman might cut down the appropriation for the bureau so as to cripple it. Hence the request was usually granted.

Since Mayor Hart came into office he has been compelled to make so many removals in the interest of economy, that it is now estimated that some $500,000 or $600,000 has been saved to the city already. Early in his term, on meeting with the head of the bureau, he suggested that if there were any superfluous men in that branch of the service they be removed; but he added that he did not want one man disturbed whose services were needed. The next day the head of the bureau brought in a report saying that at least one-third of his force could be discharged at once without any harm to the efficiency of the bureau.

In the municipal printing plant, under the Quincy regime, one of the employes was notoriously unsatisfactory. He was told that his services were not needed and that he could consider himself dismissed. He replied jauntily that even the public printer did not dare discharge him. This impudent reply resulted in his prompt discharge. Yet he came back the next day, and said coolly to his superior: "Alderman Blank of South Boston says I'm to go back to work; but if you make any kick about it I'm to have your place and you go. See?" And he did stay, although his work was as unsatisfactory as before.

It might be supposed that the civil service laws would interpose some obstacle to loading the service down with inefficient men; but it was found that there were some ways of evading the civil service laws. If the men had applied for work as skilled workmen or as ordinary employes they would have been compelled to show their fitness; but many of the applicants were made for service under queer trades, not generally supposed to be needed in the city's work. Often it would happen that the ap-

plication thus put in would be the only one of its kind. The civil service commissioners had, of course, prepared no examination for such a trade. The applicant was registered, and then there would promptly follow a requisition for just such a worker for one of the city departments.

In a list of about fifty men who were employed in the water department on clerical work, or in inspecting hydrants or water pipes, it was found that one had entered as a "coppersmith," another as a "shipcalker," and another as an "expert swimmer." There were "sailors," "dial makers," "rubber gasket makers." "riggers," and "splicers," "miners," "stonecutters," "beam tenders," "wiremen" and "rodmen" in the list, also, each demanded by special requisition for a man of that trade. About every branch of human effort except that of "expert balloonist" or "skilled animal trainer" may be found in these special requisitions; and the only reason these were overlooked is probably that they did not occur to the fertile brains of the ingenious evaders of the civil service laws.

As has been said, the different departments were so overloaded with employes that the expenses of running them were far greater than would have been the expenses of an ordinary business firm doing the same work but employing far less men. In order to make a show of being self supporting, the departments were obliged to charge for each job much more than it was worth. On paper the departments were self-supporting. Only a few months ago an investigating committee from New York was convinced that the printing plant was financially a success; but the charges made by the printing bureau for its work were much higher than the price at which the same work could have been done by private firms.

What would have been the result if the Boston experiment had been carried out upon a businesslike basis is a question which may be discussed by theorists. What actually resulted has been shown. As compared with the political conditions in New York, Philadelphia, Chicago, or San Francisco, Boston political methods are popularly supposed to be as pure as the most widely advertised brand of toilet soap. Yet Boston has learned, with mixed emotions of surprise, pain and chagrin, the results of its own experiment in public operation of public business. The question of "municipal ownership" has been settled for Boston. The proposed Utopia has been forced into insolvency, and a hard-headed Yankee banker is now engaged in winding up its accounts in a prudent manner.

It may be added that in the mean time those public franchises that have been operated by private capital in Boston are paying good dividends; but they are run on business principals, and without any interference on the part of politicians. Possibly there is some American city where the Boston experiment could be repeated without political interference; but I do not profess to know just where that city is to be found.

J. G. **BOYD**, says: In several instances when the writer was selling and erecting electric light plants throughout the country, he was asked his opinion of the feasibility and desirability of municipal ownership. He seldom had but one reply to make to the query and that was this: "Do you, sir, realize that when you cast your vote for municipal ownership that you have, in effect, mortgaged your property by the proposed issue of bonds, from the sale of which is to be derived the funds to create such an enterprise, by virtue of the fact that you will have to pay interest on those bonds and provide a sinking fund for their final payment?" Of course many of the voters are not property owners and are disinterested in that phase of the question, but usually they are in the minority. We all of us understand how the disciple of municipal ownership, in his presentation of the so-called merits of his scheme, is wont to "paint the lily and throw a perfume o'er the violet;" he represents to them how municipal ownership will reduce the cost of these commodities, and the undertaking is entered upon with enthusiasm. In the first few years, or during the period of dress parade conditions, the showing and the balance sheet certainly appear attractive: then as extraordinary repairs become necessary, then at once becomes apparent the direct result of political preferment in the selection of a major domo, and the negative era is entered upon with the advancement of many natural reasons therefor. Here is where the non-property owner commences to pay the fidler for his dance, earned through the ballot box with his bond-voting ballot in his hand, and inasmuch as his income is quite limited, in the end he suffers the most, and the longer the industry is operated the harder he is hit by increased taxes.

The *Electrical World and Engineer* give extracts from Prof. Shepardson's paper on municipal ownership, which shows some experiences with municipal plants:

PROF. G. D. SHEPARDSON, in a paper on municipal ownership, read at the recent convention of the Northwestern Electrical Association, recited some incidents illustrating the incompetent management of some municipal plants. The state of the records kept in some of them is, he said, almost incredible. In several towns there is no complete record of the service connections to the water works and electric plants. In one place, a new superintendent found it necessary to shut off the water to enforce the payment of back water rents. There was no plan of the water mains or services. He, therefore, was compelled to open the streets and search for the cut-offs, for which purpose the service of a chain gang from the county jail was secured. In another town, when the collector was getting a promise of payment from a merchant, he was requested to bring in the bill for the meter in the barn at the same time.

The collector held his own council, and discovered a meter with a number of lights, for which no record could be found. In that town, the only account books found were an electric light book with monthly columns for accounts of customers, and an individual account book for water consumers, there being no record of purchases, repairs or any

other expences. In another place, by a careful canvass of the town and an examination of the lines, water and lights were added to the record of about $900 income per year, and no one knew how long they had been getting free service. In another place, where the rates are low and the water power leaks badly, so that it is necessary to spend several thousand dollars at once, the superintendent is confident that the plant is clearing about $800 net profits per month. In another town "there are no records and no system of accounts."

Closely allied to poor systems of bookkeeping is the incompeteney of the city clerk or collector who has charge of records and collections. They do not understand the business, and naturally do not make it pay. In one instance the collector knew practically nothing of the station working, was ignorant of the station output, amount of coal used for electric part of plant, etc. Owing to inefficient and incompetent officers, all sorts of prices were charged for supplies and work furnished the city. For example, a plumber was paid $2.20 for a valve costing 90 cents, and other items in proportion. In another place, the innocent recorder was beguiled into paying a higher price for a new lot of incandescent lamps, "because they had more watts than the kind formerly used."

The committees of the town councils are often green hands and of little value in administering municipal plants. In one place a former collector had been found short in his accounts, and a committee was appointed to check his work. After two days upon his books, they made a report on the shortage, which was made good, and the bondsmen were immediately discharged. Soon after, when the water rents came due, a number of people were found to have his receipts for dues which had not been credited on the books, but the man's bondsmen had been released, and the town had a considerable sum to charge to profit and loss. A committee went over a lot of old accounts, and found that their predecessors had approved reports in which there were serious defects, but lest they should seem to reflect on the abilities of their friends, the superintendent was instructed to call it square, and open a fresh account with each person whose accounts were found faulty in former reports.

A case recently occurred in a neighboring state, showing how short-sighted some councils are in regard to franchises. A company applied for a franchise to furnish light and power from a water power not far away, intending to spend about $30,000 in the plant. After dallying along for some time, the franchise was granted by the council, but vetoed by the mayor, who wanted a municipal plant. Although the town was already within $8,000 of its bond limit, it voted bonds in that amount to build a plant, hoping that in some providential way it could put in a plant. In one town, where a committee of the council was supposed to keep track of matters, a superintendent managed to do away with over a thousand lamp renewals in a single year, of which there is no account. Over $300 worth of fixtures sold without record were traced.

The superintendents of municipal plants are often incompetent. The superintendent of one plant where they still use 50-volt transformers,

heard of the saving in using large transformers, so he bought one and tried to supply 50 lamps one block distant by a No. 6 wire (assuming one ampere per lamp and 400 feet to the block would give a drop on the line of about 22 volts). The superintendent was sure that No. 6 was large enough, for the insurance rules said it would carry it all right. The trouble was, therefore, in the transformer, and he compelled the agent to trade it for three small ones. The large one "did not regulate" as well as the small ones, and he is sure that the modern idea of large transformers with secondary net works is a mistake and a failure, for he tried it.

In another town of about 4,000 inhabitants, a technically-trained superintendent is saving about $6,000 annually above the records of his predecessors. In a smaller town, a similar man is saving between two and three thousand dollars annually to the town on account of more skillful management. He increased the revenue by $100 in a single month by using better transformers and lamps, although the station output was 10 per cent less. The station output was materially lessened by inspection of the circuits and tying up the lines where they had fallen upon the cross-arms. Incandescent lamps on flat rates taking 58 to 70 watts, were replaced by 53-watt lamps with marked economy. In another station the superintendent confided to an agent that he was bothered about learning the frequency of his alternator. The agent said it was too complicated a matter for him to figure off-hand, but he would calculate it when he returned to his office. The agent found that the practice of his own company in similar cases was to use 125 cycles, and he reported that the superintendent had such frequency. As a matter of fact, it was 140, and the speed was marked on the machine. In one town the chief reason why one alderman voted in favor of one system against a lower bid, was that his preference was the machine with the "kilowatts," while the cheaper machine was a "multipolar" machine, and he preferred kilowatts to multipolars.

In the laudable endeavor to secure economy, the mayor and council frequently lose at the bung while saving at the spigot. This occurs both in the first purchase of the plant and in its later operation. After one town had voted to put in a lighting plant, the mayor took a trip to learn what he could. After consulting with several agents and getting propositions from them, he called upon an engineer, who was given to understand his services would be required. After spending some hours pumping him, the mayor left and went home, where he concluded that he was enough of an engineer himself to lay out the plant. So he bought some machines, hired a wireman, and the plant was put in. At another place, a resident bought some second-hand machinery, and after putting it in operation, sold it to the town for what it would cost when new. In a few weeks they had to spend about a hundred dollars for repairing the armature, and then had to buy a new machine.

At another place they decided to secure a cheap engineer to design their plant. He specified a 20 horse power gasoline engine to operate a 600-

light dynamo, and, in addition, to drive the pumping machinery for the water works. The council made a contract for the gasoline engine, as specified, including a proviso that if a steam plant were substituted, the gas engine contractor was to receive a commission of 15 per cent of the cost of the steam plant. It is reported that this was actually done and paid. Two of the larger towns of the state were contemplating municipal ownership, and each secured the services of an inexperienced young man to prepare plans and specifications for the plant; in one case, because he was a friend or relative of one of the committee; in the other case, probably because he was cheap. The country is full of half-baked electricians who pose as engineers and as advisers to investors.

There is frequently an attempt to reduce operating expenses too far. At one place the council discharged a good engineer and hired another because he was cheap. Within three days he got his cylinder full of water and broke the girder of the Corliss engine. It is common even with a privately-owned station, to attempt economy by hiring cheap firemen, since any one can shovel coal or throw wood. But owners fail to recognize that by paying ten to twenty dollars more for securing a capable fireman, they are apt to save his extra wages several times over in reduced fuel bills.

In some cases there is great loss on account of downright dishonesty of the superintendent or the council committee. A city employing an honest superintendent with liberal pay and some backing in the council, will often prevent small and also large steals which are almost invariably found in municipal departments, such as lamp renewals (on which it is difficult to keep accurate account or check), "rake-offs" on purchases for the plant, for which in the end the city pays. One supply company offered a new superintendent as high as 20 per cent on all purchases the year round, as they had always done so. This is substantiated by old bills. Lamps are checked up once a month while burning, and one is often asked to go easy in counting, being offered all sorts of bribes from cigars or drinks to considerable sums in cash. Certain officials are known to have received special concessions in this way, amounting to several hundred dollars per year. All this could have been prevented by a proper system of checking, but at best comes down to one man being honest. Carloads of wood have been sold "by the car," by former superintendents. An investigation by an alderman indicated that a loss of over $1,000 per year had been received from that source alone. In another place the city recorder is said to collect the accounts, and sometimes sublets the job to his friends, who knock down about half and turn the balance over to the recorder, who in turn transmits to the treasurer so much of it as suits his convenience, there being no records and no other system.

The political conditions prevent best results in many plants. Where the employes are appointed by aldermanic influence, it is not uncommon for an underling to retort to his superior officer, when corrected for some shortcoming, "Oh, well, I have more pull than you

have, and what are you going to do about it?" In one town, until recently, the plant was operated by two parties, an engineer, who took care of the station, and a lineman in charge of outside work. These parties were not on speaking terms, and, of course, each attibuted all trouble with the lights to the other man's part of the plant. This state of affairs continued for several years, during which time the arc system was in bad condition, the lineman attributing it to the dynamo, and the engineer laying it to the lamps. When a change was made, there were two applicants for lineman ; one a good man who would have attended to business, the other was a young son of one of the aldermen, and with little experience or ability. There were also two applicants for fireman ; one a good man, and the other a lazy, good-for-nothing fellow who claimed to have considerable influence in the country, so that he could turn considerable trade to some of the stores in which the aldermen were interested. By combining forces, the poorer man was appointed in each case.

There is a continual struggle between the temperance and the saloon element in most of the towns, and when a new election puts the opposition into power, the superintendent is almost sure to lose his place in favor of some friend of the new management. In one town the superintendent had found the station and accounts in very bad shape, and was getting them into fair condition, when the election went "wet." The next day the new mayor informed the superintendent that he would give him any kind of a recommendation he might ask for.

JOHN H. PERKINS, superintendent of the water department, Watertown, Mass., in his annual report makes a strong plea for justice to the water commissioners of the town. The department is not paying expenses, and what revenue there is comes from the private consumers. The injustice of this course is objected to by the water board, which points out that it is unfair to make consumers, who do not represent all the owners of property in the town, pay for the fire protection of all the public and private property. If the works were operated by a private corporation, the consumers would make such a strong objection to this course that the town would have to pay for hydrant rental. Objection is also raised to the refusal of the selectmen to pay for water for the town departments. It is claimed that water is supplied to schools, for example, that it is furnished for general town purposes, and should be paid by the school department just as much as coal or the salaries of the teachers. To compel the portion of the residents who pay rates to bear all this expense is to tax a few for the benefit of all.

PROF. J. L. LAUGHLIN of the Chicago University, says : "Should the municipalities own such quasi-public institutions ? In answering the question we must always bear in mind the fact that under municipal ownership these properties must be managed on business principles, with great ability and sagacity, for a profit. Is it reasonable to suppose this can and will be done in American municipalities ? And we must

also bear in mind the solemn fact that municipal government is to-day admitedly the one branch of American political experiment in which we have failed. That is unfortunate, but it is a fact which we cannot blink. And it is no help in this discussion to urge what might take place under ideal conditions—how safe municipal ownership would be under honest aldermen, with a perfect reform of the civil service on the merit system, and assuming the existence of a vigilant and active public opinion. We must deal with our municipalities as they are, and not as they might be. And in this connection I venture to insist—and insist very strongly—that the examples of well-governed municipalities in Europe, like Glasgow, are, for the reasons given above, aside from the point. Even though municipal ownership of gas works or street railways by Glasgow might work satisfactorily, that is no reason whatever why, for example, a city like Chicago, composed of entirely different elements, with different political standards than those of Glasgow, should follow this example. I am quite ready to admit that with ideal political conditions a city like Chicago might do things which now would be foolish and unwise.

EDMUND E. HIGGINS, says: "We would expect that the British tramways, so carefully controlled in the interest of the public, would be paying a larger percentage of their gross receipts into the public treasury than the 'hydra-headed monsters' which our American demagogues are so fond of talking about as 'sucking the life blood of the people.'"

What are the actual facts?

The British tramways are paying into the public treasury less than $600,000 in the form of taxes, or, but 2.4 per cent on gross receipts of $25,000,000, while the street railways of New York and Massachusetts are paying yearly $2,500,000, or, 4.7 per cent on gross receipts of $50,000,000.

Here is interesting light upon the virtues and vices of rigid municipal control of corporate enterprise. If, forty years ago, British municipalities had said to private capital, "come in and help us make our cities what they ought to be," the British tramways would to day be earning $200,000,000 gross instead of less than $25,000,000, and could be paying as taxes from $8,000,000 to $10,000,000 a year into the public treasury, instead of a paltry $600,000. This is not an exaggeration. The figures as stated are an underestimate rather than an overestimate, as is well understood by all who have the slightest knowledge of street railway finances and possibilities, in a densely populated country like Great Britain.

E. W. BURDETT, referring to the wild statements made by an advocate of municipal ownership, says:

"Another striking illustration of the figures usually given out upon this subject are various articles written by a man who writes articles by the yard and uses figures by the million. But he is one of that somewhat numerous class of persons who know a great deal that is not so.

His tables are a comedy of errors, and yet they have been printed widely and have undoubtedly influenced some city fathers in favor of municipal lighting."

PROF. MEYERS of Chicago, says: "It is extremely doubtful if the city has saved any money by operating a plant of its own, and it seems very probable that the expense of operation considerably exceeded the amount paid for hired lamps."

MR. YERKES, referring to the municipal plant in Chicago, says: "The operation of the electric plant is to-day a disgrace to this community. It is not economical or practicable to operate these industries by the municipality. There can be only one reason why it should be done, and that is to support an army of politicians and their supporters, who, we all know, care little for work, and who are of no service to the industry they pretend to be engaged in."

A COMMITTEE OF THE NEW YORK LEGISLATURE, after examining many expert witnesses and taking two large volumes of testimony, reported as follows:

"But few have advocated the ownership and operation of railroads by the cities. The preponderance of testimony taken and the great majority of opinions expressed before this committee is against the system so commonly referred to as municipal ownership. It is obvious that, with our present system of municipal government, the ownership and operation of railroads by the cities and municipalities would have a tendency to convert these enterprises into powerful political machines, the result of which would be detrimental to the public welfare."

DR. ALBERT G. SHAW testified before the committee as follows:

"I have never dreamed of advocating municipal ownership in the City of New York. I have never thought of it as a remedy.

"I do not believe the conclusions derivable from the experience of foreign cities, although I have been interested in them; but I never believed any experience derived from them of any applicability to our cities."

The closing paragraph of the committee's report is conclusive:

"As an abstract proposition we believe that no government, either national, state, or municipal, should embark in a business that can be as well conducted by private enterprise.

"The reverse of this proposition carried out to a logical conclusion would put all business enterprises under governmental management and control and leave to no citizen any hope, ambition, or aspiration beyond that of seeking an official position that affords a meager existence."

EDITORIALS FROM NEARLY ALL THE LEADING JOURNALS IN THE UNITED STATES.

A MUNICIPAL OWNERSHIP EXPERIMENT.

THE PLAIN DEALER, Cleveland, Ohio, says: What "municipal ownership of public utilities" has done for some cities in the old world has frequently been approvingly cited in advocacy of a similar procedure in our own cities. But the argument has failed to convince persons who remember that municipal conditions in this country differ materially from those in most old world cities. What has been wanted is an experiment in some large city under American conditions. If such an experiment should prove successful, there would be little difficulty in converting those who are not convinced by the Glasgow argument.

Although the fact does not seem to have been generally known elsewhere, such an experiment has been carried on during the last two years in Boston, and its result is instructively described by Mr. Guild A. Copeland in the current number of *Harper's Weekly*. The title of the paper, "An Insolvent Utopia," suggests the outcome of the effort on the part of municipal government to do its own work better and cheaper than it can be done by private enterprise.

When Mayor Josiah Quincy went into office about two years ago he conceived the idea of building up a model city government, whose employes should themselves do the work that is done in other cities by contract or through private firms. In addition to the usual departments for building, cleaning and repairing streets, conducting water systems and sewer systems, a city bureau was to turn out Boston's municipal stationery and printing work, and another bureau was established for carpenter work, repair work of various kinds on the public buildings, and even for electrical construction and repair. An ice plant was established for cutting and storing ice to be used in the drinking fountains. Veterinary bureaus were devised to look after the horses used in city work. Of course, the horses themselves were bought for the city. Wheelwrights, blacksmiths, painters and letterers, and a whole army of labor came into the city's employ. It was the nearest approach to a realization of the idea of municipal ownership of public utilities yet attempted in the United States. The theory was that the city would in this way save to the tax payers the profits of contractors and middlemen.

Some months ago Mayor Quincy gave way to Mayor Hart, an old Boston business man and banker. Having to sign some vouchers and estimates for the city work, he was struck by the figures, which were far above current rates. A quiet investigation was begun, the result of

which was the closing up of one after another of the much-lauded city bureaus as hopelessly extravagant.

A few items in the discoveries made will illustrate the character of the "economy" of municipal as compared with ordinary business methods. A job of electrical equipment on the ferry boats operated by the city should have cost $6,800. As a matter of record, it actually cost $10,200. The electrical work on a city building for hospital nurses should have cost $1,528. It really cost $4,754. The work on a city armory should have cost less than $2,600, but the city had to pay nearly $6,700 for the job. Some work on a public school, estimated as likely to cost $1,471, if done under contract, cost the city about $3,600. The ice used by the water department in the drinking fountains cost $60 a ton, when it might have been bought of the local ice companies for $2 or $3 a ton.

The result of the "municipal ownership" experiment is an enormous increase of the city debt and a severe strain on its financial abilities. It is not charged that any embezzlement of the public funds has been committed. Every expenditure is accounted for with proper vouchers. There was wasteful extravagance and gross mismanagement, but no downright dishonesty calling for legal proceedings. The feature of the experiment was due to politics.

Mr. Copeland says the reason why it cost anywhere from 25 to 50 per cent more for Boston to do its own work than an outside business firm would have charged for that work is to be found in the fact that the payrolls of the different bureaus were absolutely loaded down with political appointees. "The heads of the bureaus had to submit to this, for self-evident reasons. The appropriations for their work were fixed by the city council. If an alderman asked to have a friend appointed, and the request were not granted, that alderman might cut down the appropriations for the bureau so as to cripple it. Hence the request was usually granted."

Boston has a civil service system, but it proved to be of small protection, the ingenuity of the politicians having found various ways of evading the civil service laws. The Boston experiment is an object lesson to other cities where "municipal ownership of public utilities" is under discussion.

THE NEW YORK TIMES says: "The apostles of municipal ownership in this country have conjured with the names of Glasgow and Nottingham. They have pointed to the shining success of the public management of the business of lighting and transportation in British cities as the full justification of their doctrines. That part of the American public which puts its trust in the advocates of municipal ownership has been led to believe that the wisdom and soundness of the policy of public operation were solidly established and put beyond dispute by the results of British experience.

In a letter which we print this morning, Mr. Robert P. Porter exhibits the fruits of British experiments in this branch of state social-

ism in a new and startling light. So far from being content with its workings, our English brethren are clamoring for a royal commission to inquire into the subject of "municipal trading," as the municipal ownership of public utilities is called over there, with a view to finding a remedy for the serious and growing evils of a policy that has proved to be profligate for the cities and injurious to the public.

THE MILWAUKEE JOURNAL says: Municipal ownership is an experiment. It has not vindicated itself conclusively in a single instance in this country. One reason is that no plant is yet worn out among those called successful.

New ones start up with promise and we hear of them. What of those abandoned? Who knows of them? No two cities are worked on the same plan or under the same or like conditions. It is all experiment. The city of Milwaukee asks Ypsilanti what her lighting costs per lamp per year. The reply is, $37.

To Scranton, asking the same question, the answer is $23.61. To Mobile the sum is given at $35.79, while Steubenville is told it is $40. That is, Ypsilanti herself does not know within $20 per lamp what her lights cost. Suppose some city were to ask Milwaukee what the net income of her water works was for the last year; how many different answers could be given from the reports with equal ignorance of the exact truth? Ypsilanti is but one example—it can be repeated of almost every one in the business.

THE DETROIT EVENING NEWS says: "This is a government of the people, for the people and by the people. It has no place in the field of speculation, transportation or commerce. It has no right to expend money either for the convenience or advantage of classes that are so small, when compared with the whole body of citizens, that they do not numerically warrant the expenditure for their advantage. It has no right to engage in business that is outside the sphere of legitimate governmental activity."

THE NORTH AMERICAN REVIEW says: "The constant element in municipal affairs is the unremitting desire of the politician to gather masses of votes, and of the contractors to place men who furnish them to prey upon the city treasury. The people who do not pay are always ready to create debts against the people who must pay.

"'They who do not pay the piper are ever ready to dance to his music.'"

THE NEWARK ADVERTISER says: "It is a part of the plan by which it is proposed that the government should own and operate all public enterprises of its kind, or any other.

"In fact it is only necessary to carry the argument a little farther and make the government paternal in every respect, giving it the right to operate all business enterprises, and even to feed the people."

THE TIMES, LOWELL, Mass., says: "If the cities in this commonwealth should ever get control of gas and electric lighting, it is to be hoped they will manage the general illuminating department better than they have some other departments. If they do not, we shall be in semi-darkness half the time. Why not let well enough alone?"

THE BOSTON DAILY TRAVELLER says: "We are not aware of any necessity why cities and towns should undertake this form of business any more than others which have always been conducted by private enterprises, and we are not called upon to consider what extraordinary power the commonwealth may exercise or may authorize cities and towns to exercise in extraordinary exigencies for the safety of the state or the welfare of the inhabitants. If there be any advantage to the inhabitants in buying and selling coal and wood for fuel at the risk of the community on a large scale, and on what has been called the co-operative plan, we are of the opinion that the constitution does not contemplate this as one of the ends for which the government was established, or as a public service for which cities and towns may be authorized to tax their inhabitants."

THE WEEKLY SENTINEL, LA MARS, Iowa, says: "Many of the people argue that it would be cheaper to make a close and careful bargain with some company. They say that it is better to keep such things out of politics. That a man whose business and living depend upon the successful managment of the works would be more likely to run them well than a committee of the city council, that would be changed every election; that the owner would devote his whole time to the matter for years, and that officials could only give it a part of their attention.

"They also argue that public work usually cost more than private work, just as graders working under contract on a railroad move more dirt than men who work by the day to work out their poll tax on city streets or country roads."

THE JOURNAL, Indianapolis, Ind, says: "The theory of municipal socialism assumes that all public officials are honest and efficient, and where this is the case it works out well, but, as a matter of fact, they usually are not. The city, in operating large public concerns, always pays liberal salaries and wages, but does not get, as a rule, as efficient service as private concerns. There is a continual menace from political influence, where there is a large patronage to distribute, that is likely at any time to cripple the efficiency of the service. Again, if we were to put in an electric plant what assurance have we that the next board would not want to tear it out and put in a better one? Electrical inventions become ancient history in three or four years nowadays. We might put in an expensive plant and find, by the time that we had it paid for, that we had a 'back number' on our hands."

THE AMERICAN COMMONWEALTH says: "Whatever advantage such annexation may have brought, it so increased the opportunities for mismanagement and plunder that it has enabled Mr. Bryce to assert, with all the more confidence: 'There is no denying that the government of cities is the one conspicuous failure of the United States.'"

THE POLITICAL SCIENCE QUARTERLY says: "Those who advocate state management in the United States, forget to think of the havoc that would be created by the simple political influence of our lawmakers. Were the state to run the railways under our political system, the claims upon our legislators for spoils would be increased a thousand fold."

THE BULLETIN, Providence, R. I,. says: "To add the manufacture of gas and the generation of electricity to duties already beyond the grasp of our city officials would merely call more attention to their incapacity. The present test of employing men who vote the straight ticket of either party is a modest one, hardly requiring the intelligence shown by a school girl in selecting a new gown, yet to have so voted for a number of years constitutes a claim on the recognition of the party which is considered imperious. Perhaps it is an instinctive conception of its own limitations that has hitherto encouraged the conservatism of all Rhode Island communities. The camel has a long journey before it, and it is wise to adjust the load to the back which has to bear it: if our neighbors are experimenting with their caravans, why not rest awhile in order that we may take advantage of their blunders? Those also serve who only stand and wait."

THE CINCINNATI COMMERCIAL GAZETTE says: "Whether the chimerical idea that it is the province of government to do everything for everybody has been promoted by a superstitious vision of an impossible political and social condition of the world 11 years from now, or whether this idea has received an impetus from some other quarter, there certainly seems to be a more pronounced effort than ever before to impose additional duties upon the government, notwithstanding the fact that all experience proves that government interference with private enterprise is prejudicial to the interests of the public. The proposition appears absurd when carried out to the legitimate result."

THE ELECTRICAL DOINGS says: "We are all familiar with the devious ways of municipal corporation financiers by which interest or original outlay is charged to one account, superintendence to another, and cost of operation to another. Nothing is harder than to disentangle the various items of a city's expenses and to group them under headings which will give a fair comparison with the work done by private corporations in the same field. Besides, none of these cities has been long enough in the business of electric lighting to be able accurately to estimate the cost of renewals and repairs."

THE CHICAGO TRIBUNE says: "*So far as things have gone on the city has paid two prices for its electric lights.* The work of extension has been far from satisfactory. The aim and intent are to make the city government a paternal one, providing light, heat, power, transportation, electric and telephonic communication, etc., thereby constituting a vast machine with powers far greater than ever wielded by Tammany, and giving opportunity for corruption on the biggest conceivable scale."

THE CHICAGO EVENING JOURNAL says: "But where is the thing to end when once begun? What reason is there why the city should not go into the business of lighting streets, dwellings and public buildings, and also into the heating of these structures? Why should not the city furnish transportation over its territory as well as light? The reason why none of these things should be done by the city is that they can be as well if not better done by individuals or by corporations.

"So long as municipal government cannot keep the streets in proper condition, it is not worth while for them to extend the field of their inefficient work."

THE CHICAGO TRIBUNE says: "According to expert testimony, backed with reliable statistics, Chicago's municipal electric light plants cost the people more a light than those of any city in the country."

THE HERALD TIMES of Chicago, says: "Those who advocate municipal ownership of street railways, gas plants and properties of that kind, assume that municipal management will be honest and capable, and that the business will be carried on for the advantage of the public. They start out with the hypothesis that if these properties are intrusted to the municipality, by some peculiar dispensation of politics the boodlers will disappear and upright men take charge of all the large and vastly increased interests of the city. One argument we sometimes hear is that if the city owned these franchises there would be no temptation to boodlers to break into the city council, as there would be nothing for them to make money out of, and their occupation would be gone.

"Now, then, say the advocates of municipal ownership, let the city build and own its own street railways, its own gas plants, its own elevated roads, and the city council will most surely manage them honestly. We would like to know why. Will the vastness of the property so stagger the Coughlins, the Powerses and the Hinky Dinks that their consciences will all of a sudden bloom into sensitiveness? Or will it only give them a bigger quarry and an enlarged field for their peculiar enterprise?

"If there was municipal ownership in Chicago to-day, and the city owned every gas plant and every street railway within its borders, these men and their associate boodlers could dispose of them and defy the citizens, just as they have disposed of other property and franchises belonging to the city and laughed to scorn the protests of the people."

NEW WORLD of Chicago, says: "There is a great deal of force in the argument which some of the daily papers have advanced against the municipal ownership of street railroads, gas plants, etc., in this country. *It is argued that if the city councils in this and other cities are so thoroughly corrupt that they cannot be trusted to deal honestly with private corporations in regard to these matters, it is hardly to be expected that they would deal honestly with the public, if they had the management of such enterprises in their own hands.* This really goes to the root of the whole matter. So long as the voters of the city see fit to elect, over and over again, aldermen whom they know to be absolutely corrupt, and for sale to the highest bidder, it is hard to see how municipal ownership, or any other kind of ownership, can prevent these men from doing that which they notoriously go to the council for the purpose of doing."

THE EVENING NEWS, Toronto, says: "It has been found in Philadelphia that municipal management of the gas works is a failure. It costs at least 25 per cent more to supply gas under civic management than it will when a company takes hold of it, in addition to which there have been innumerable scandals in connection with the service.

"The opposition of the *News* to municipal ownership and management of public franchises has been, all along, on the ground that city business cannot be conducted with the same economy as that of a private corporation, and in the operation of a service of that kind, the waste consequent upon loose management is equal to a handsome profit for a company."

THE NEW YORK TRIBUNE says: "If the works are not leased, the management will probably continue to be as corrupt and generally unsatisfactory as hitherto, and to furnish an 'awful example' against municipal ownership of such establishments, or against municipal management of them. Yet, everybody knows full well that all the trouble lies in the fact that the department is controlled, not by business principles, but by politics, and not merely local politics, but state politics."

THE NEW YORK COMMERCIAL ADVERTISER says: "No substitute can be found for private interest, and the hope of profit in stimulating efficient and economical service. Public ownership would waste many times the profit of private owners, besides lowering the quality of service and condemning valuable property to decay by neglect. This is true of state as of municipal affairs. State socialism would inaugurate a reign of waste, inefficiency and corruption."

THE ROCHESTER, N. Y., POST-EXPRESS says: "Not a city in the United States can be named where the business intrusted to it is managed with anything like the skill and economy of a successful private business. It may be said, as is, in fact, often said, that when gas works and street cars are in the hands of private capitalists, the public is mercilessly robbed to enrich them. Even if the charge be true, is it robbed to the extent that it is under political management?

THE ELECTRICAL REVIEW says: "If these scientific enthusiasts could be persuaded to band themselves together and carry out their revolutionary ideas on some Pacific island, they would not only receive convincing proof of the impracticability of their political notions, but would spare the United States much annoyance. It has been repeatedly and convincingly demonstrated that private competition can be relied upon to do better and cheaper work than municipal management. One watches with a careful eye every step of the management of its concerns; the other is invariably accompanied, in the long run, by mismanagement and jobbery. What is everybody's business becomes nobody's business, and the poor tax payer always suffers. There is enough corruption, forsooth, in political affairs in the present scope of governmental functions, without taking dangerous chances on an expansion of the field of operation. The less the state interferes with private affairs, the better for the public."

THE BOSTON JOURNAL says: "Whoever has given close attention to the processes of municipal politics and administration, must shrink from adding to the opportunities and inducements to mismanagement and personal agrandizement at the public cost.

"Under municipal control, the present experienced employes of these companies would be displaced in favor of political 'workers.' The henchmen of the ward boss are comparatively harmless, digging in a trench, but it isn't pleasant to imagine the results if they should be intrusted with the responsibility of running a big gas plant, or let loose among a lot of wires surcharged with electricity. There certainly would be no gain in point of safety if the powerful agencies employed in the lighting of our cities should be turned over to the tender mercies of the small politicians, and experience in most other municipal departments suggests there would be no real gain in cheapness."

THE COURIER, San Bernardo, Cal., says: "The city, in our opinion, cannot and will not run electric lighting as economically as would a corporation of business men. Every city in the Union that has experimented with furnishing its own electric lighting has made a flat failure of it from an economical standpoint. A municipality cannot, and, in fact, to corroborate our assertion, never is, as careful or economical as a private business association. Politics will interfere. The management, the officials, the employes of the city's electric lighting works would, as a rule, be working petty politicians. They would rarely be faithful. Ward workers are never faithful, except to their bosses, who can give them a grab at the spoils. Let the city buy a plant and furnish its own electric lighting, and it will be a heavy loser financially. One party or another, one interest or another successful at the polls, one set of trustees or another, will make change after change at the heavy expense of the tax payers."

THE DISPATCH, Columbus, Ohio, says: "It would not be good policy, in the judgment of any well-informed, practical business man, for the city to erect an electric light plant. The best statistics and opinions we have on the subject, show that the management of such things costs more under the auspices of a city government than by a private corporation, yet we have full faith in them because of the well-established fact that the cost of managing work under municipal corporations is almost invariably greater than it is under the supervision of private corporations. This is largely due to the fact that in municipal corporations men are appointed on account of political, rather than strictly business consideration."

THE HARTFORD TIMES says: "The work would be no better done than it is now, and probably not so well done as it is and will be by private enterprise. We might as well say that the government should take possession of all the horse-shoeing work in the country, cut down the prices, and put enough men to work to shoe horses rapidly, so that no one would be required to wait when the ice comes, and the horses need caulking; and then take possession of the boot and shoe and tailoring business, and run the factories. It would be one short step from one thing to another."

THE EVENING POST of San Francisco, says: "Nothing is more certain than that up to the present time, municipal government all over the United States is a failure. In cities it is one unending failure from Maine to California. There is not a large town in the country that is not infested with bosses.

Theorists disagree as to the cause of municipal misgovernment, but there is no doubt that a large part of the misgovernment is due to the spoils system."

THE CINCINNATI TIMES-STAR says: "We have had a taste of government ownership right here in Cincinnati for several weeks, and the flavor has not yet gone from our mouths. Our water works have been run by an arm of the government, and have had so much politics mixed in them that screws have twisted themselves from bolts, and steel castings have warped until the horrors of a water famine, for several days, stared the people of this city in the face."

THE GAS LIGHT JOURNAL says: "Their short-sighted meanness to their salaried officers, influence of ward politicians and newspapers to cut down salaries to the standard of weekly wage-earners, its tendency to keep educated and skilled men out of the profession, has resulted in bad management and great ultimate loss.

"Headstrong, perverse committee men think they know everything, and can dispense with professional advice to a greater extent than the directors of a gas company ever pretended to do. They have a habit of going on tours of inspection of gas works in distant towns, often with-

out their engineer, without having any knowledge of the subject, and of misunderstanding and misrepresenting what is shown or told them confidentially, etc."

THE NASHVILLE AMERICAN says: "According to this idea the government has a perfect right to make soap or to manufacture ready-made clothing or peanut candy, if they can do it cheaper than private individuals, and, indeed, there is no stopping-place when once the rule is applied. Of course, such an idea as this could not for an instant be entertained by any one but the most pronounced advocate of centralization, and centralization in its worst form."

THE NEW YORK TRIBUNE says: "A municipal department is controlled, not by business principles, but by politics, a synonym of rascality."

THE PORT HURON TRIBUNE says: "A little local competition would be better than for the city to go into the electric lighting business, which might develop several soft places for experimental favorites, for which the dear city would have to foot the bills and the tax payer could stand back and take it out in growling."

THE NEW YORK TIMES says: "The past week has brought revelations of the most barefaced frauds in the water works department of the city. A conservative estimate gives $500,000 as the sum of which Chicago has been robbed during the last two years. But in addition to direct stealing, there can be no doubt that through lax methods of administering the department, the city loses more than $1,000,000 each year, and that is a low estimate. Only very unsophisticated citizens can be surprised at any degree of corruption, no matter how great its magnitude, for the rottenness of the department has long been notorious. The details of the present investigation make manifest the most unabashed fraud, and effrontery in the pursuance of criminal methods that indicates long familiarity, coupled with the utmost confidence of escaping punishment. The truth seems to be that each successive crop of thieves rested secure in the certainty of being followed in office by fellows of their own stripe, who would find their profit in imitating scoundrelism instead of exposing it. Under such circumstances no extreme caution was necessary, and events justified their sense of security for many years, until now, for the first time in a long period, a man possessed both of honesty and business ability has been placed at the head of the department."

THE PHILADELPHIA LEDGER says: "The city has heretofore suffered, not only from bad gas and profligate management, but from the machinations of a political clique, deriving a large part of its power in municipal politics from the patronage of the gas works. Bad government in all departments has thus resulted from city management of the gas works.

"To get rid of this venal and corrupt political machine would be to take a long step toward good municipal government, as it would be to destroy the strongest and most dangerous of all the political jobbers' strongholds."

THE WASHINGTON STAR says: "Not only do the employes of a government—of a city, state or nation—do less work, as a rule, than persons in corporation or private employment, but there is a large additional expenditure for superintendence and clerical work. Foremen and assistant foremen are appointed merely to furnish good places for friends. Chief clerks, assistant chiefs and timekeepers in large numbers are provided with salaries. It often happens that the pay roll calls for more money for these positions than for all the real workers. There are few governments in the United States, from that of the nation down through the states to the small cities, that do not pile up expenses in this way. It is true that many excellent citizens are helped along through life by this generous management of public affairs, but that fact is, nevertheless, a strong argument against municipal ownership of public works."

THE NEW YORK EVENING POST says: "The confessed break-down of the municipal gas system in Philadelphia is a severe blow to the advocates of municipal ownership. A legislative investigation has finally laid the entire system so bare and defenseless that the business sentiment of the city is now strong for turning the whole thing over to private companies. It is amusing to read that the only argument made against this course was that of 'calling attention to the rate at which gas is furnished by municipalities in England.' The argument really is, a capable and honest government can run city gas works; therefore an incompetent and corrupt government can do it."

THE NEW YORK SUN says: "The arguments against municipal or county ownership have been stated time and time and again, and it is only necessary to read some of the annual reports issued by various communities owning and operating electric lighting plants to fully convince one of the folly of such an undertaking with our present system of local government. Enterprises or industries such as telephone or telegraph systems, electric lighting plants and street railways, flourish best under purely economical conditions that are unvariably absent from municipal or government management."

EVENING JOURNAL, Jersey City, says: "Gas and electricity cannot be made absolute monopolies because of the possibility of substitution. An individual may use oil or generate his own gas or electricity, but wells can be closed, telephones prohibited and street cars limited by ordinance.

"The question that is being agitated by socialists, populists, demagogues and others is, should the cities own the plants which produce

these necessities or conveniences, or should it grant franchises to individuals to supply them?

"The water supply of Jersey City, under political management, instead of showing an annual profit, as it would under private management, shows an annual deficit. The water is supplied at a central point by a private company. The distribution is through public mains, yet the administration of the water department costs more than the water. Similar results would be shown by each of the common services required by a city under existing conditions."

TRIBUNE, Chicago, says: "Mr. Sullivan argues that municipal administration in American cities is so extravagant and unbusiness-like that the powers and duties of the municipalities should be reduced rather than increased. It is difficult to answer this objection, which is the strongest that can be advanced. Imagine the street railways of Chicago in the hands of Bobby Burke or Billy Lorimer."

THE PHILADELPHIA EVENING ITEM says: "But every one knows that so long as the gas works are under municipal control, politics, and not business methods, will mark the management."

THE NEW YORK COMMERCIAL ADVERTISER says: "For many years the city of Philadelphia has presented a valuable object lesson in municipal ownership of franchises. It has conducted the city gas works by the usual methods that prevail in American cities. That is to say, the works have been part of the city political machine. Under our system they could not be anything else. There has been the usual result of extravagance and inefficiency. Gas has been high and poor, management has been costly, and the plant has deteriorated by neglect."

THE DAILY EAGLE, Brooklyn, says: "The demand that the gas plant be turned over to the United Gas Improvement Company, to which the common council has just yielded, came from many of the best people in the city. Mass meetings were held, and prominent men made speeches declaring that the city had been unable to manage its plant successfully, and that the gas supply was poor and that the business was conducted at a financial loss. The plan has appealed to the common sense of the people. The opposition has come from two sources: The politicians, who have used the patronage of the gas works, did not want to give them up, and academic theorists, who believe that the city should own its lighting plants and its transportation plants, did not want Philadelphia to confess that the experiment of public ownership and operation had been a failure."

THE TIMES-STAR, Cincinnati, says: "There is a mistaken idea current that Philadelphia found its management of a gas plant profitable.

"What makes this deficit still more embarrassing, and still more forcible as an argument against the socialistic idea of municipal ownership, is the fact that no account is taken of the interest on the invest-

ment, neither is an account of the deterioration of the plant taken, two important factors which every careful manager of a corporation figures on at the beginning of his calculations."

THE LEADER, Cleveland, says: "A glaring failure of municipal ownership. For many years Philadelphia has tried municipal ownership and operation of her gas works, and now she is sick of it and wants to quit. That is not to be wondered at.

"Not only has Philadelphia failed to make a profit on the manufacture and sale of gas, but the works have actually been operated at a loss, while the quality of gas, which costs twenty cents a thousand more than in Cleveland, is constantly deteriorating."

THE TIMES, Richmond, Va., says; "In the first place it is generally urged that the city can supply the people of Richmond with light at cheaper rates than private companies or individuals are able to do. This statement is not borne out by the experience which our people have had with the gas works. Independently of the comparison, which is very naturally instituted in the popular minds, between the rates at which illlumination by gas and electricity, respectively, can be supplied, the comparison being very strongly in favor of electricity, there has been a growing feeling of dissatisfaction with the price at which gas has been furnished. Even if there had been no competition between gas and electricity, it is doubtful whether the people of this city would have been long content to bear the burden of the present city charges for gas.

"Such has been the principal upshot of municipal control over this question of light. It has been monopoly which has led to general discontent.

"We have on previous occasions mentioned the general ground of objection to the establishment by the city, of an electric plant of its own; namely, the interference with the competitive rights of private companies and individuals, the enlargement of the circle of unnecessary officeholders, the diversion of a large amount of public money, which can be expended to more advantage in other public improvements, and the imposition upon the people of an additional form of paternal government."

THE ADVERTISER, Portland, Me., says: "The reasons are the old ones of incompetency and dishonesty. The works have fallen into the hands of the politicians and the official spoils and the contracts for materials and services have been used for the purposes of the ward leaders and petty politicians until the conditions have become scandalous and intolerable. Nothing better perhaps, could be expected of a city so ridden by venal politicians and so corrupt politically as Philadelphia, but in New York or Chicago it would be the same. Until the moral level is lifted in the large cities, municipal ownership is inadvisable."

THE DEMOCRAT, Holyoke, Mass., says: "Philadelphia's municipal gas plant is a rank failure and the mayor is trying to sell it to private parties. He says that the plant cannot be maintained except by increasing the tax rate, while repairs and necessary improvements will cost $5,000,000 in the next three years."

THE VOLKSBLATT, Cincinnati, says: "Municipal ownership of electric plants. If we recur to this subject, it is done with a view to save the city from impending danger as far as it is in our power to avert it. The danger is great, because municipal ownership has, at first view, much to commend it to the unitiated.

"But if the saying of the old Roman, 'If two do the same thing, it is not the same thing,' is everywhere applicable, it is of particular force in this instance. Private service and public service are as different from each other as day and night, and it should not be difficult to grasp the distinction. A private corporation is compelled to husband its resources or it will prove a failure. It will therefore not invest more capital or employ more people than is absolutely necessary, and will get full value for each dollar it pays out in wages.

"It is quite different with a public corporation. The citizens furnish capital in the shape of taxes, and if this money is wasted they are simply bled for more money. In place of an expert, the management is confided to a politician, whose ignorance alone entails serious loss and damage. His employers are of the same stripe, gutter politicians, ignorant and careless, as they are appointed more with a view to their political influence than their ability; and to crown the misery we have a change of the personnel every few years. If these incompetent people have really acquired some skill and learning, a political revolution sets in, the dorminant power party is hurled from power and a new party is enthroned. Its very first effort is to dismiss all employes and to make room for the healers of its own party. Every reader will at once recognize that we merely state facts which have been experienced in our city."

THE ELECTRICAL WORLD AND ENGINEER says: "Municipal ownership in Kansas has been quite a craze, but it is the bondholders now who are doing the crazing, on account of their inability to get back the money invested. A special dispatch from Kansas City of March 29, says: 'The citizens and councilmen of Attica, Kan., met last night and discussed the question whether it would be better to arbitrate with the bondholders or to move the town. The town is, and has been for several years, carrying an indebtedness of about $33,000, including old sugar-mill bonds and interest. It was decided that if the matter can not be adjusted for the amount the town is able to pay, the citizens will move their business houses and residences to a piece of ground about a quarter of a mile south of where they now stand. The leading business men are in favor of moving.' The scheme of moving a town to escape indebtedness is not original, Ness City, the county seat of Ness County,

having practically decided on that method of unloading her burden of debt last week. A contractor has offered to move every building in Ness City to a new site nearly a mile away for half of the city's indebtedness. Half a dozen other Kansas towns are now debating whether it will not be cheaper to move than to pay bonds."

COMMERCIAL TRIBUNE, Cincinnati, Ohio, says: "'Do you know why the board of city affairs, when it came into office, adopted the contract system for laying water mains?' asked a city official yesterday. And then, without waiting for an answer, he proceeded: 'I can give the reason in a few words. It was because of the padded pay rolls which were prevalent under the system of laying water mains by day labor under the board of administration. The padding was particularly noticeable always before an election. For example, in March of that year the pay roll for the first week showed only 19 men employed, the second week showed 54, the third showed 68, and last week the roll had crept up to 99, and, when the first pay roll of April was brought before the board of administration for approval, the number on the roll was 157. The election was on April 6, and the succeeding weeks of the month found the roll dwindled to 18, and no more. It was to do away with the padding of water-works pay rolls that the board of city affairs established the system of laying water mains by contract. Under that system the citizens were given water, and the cost to the public was much less than one-half. It is no wonder that Mr. Mullen, of the board of legislation, wants to see the old system of laying water mains by day labor reintroduced. The padding of pay rolls is a valuable thing to have around the house in an emergency, such as the coming election will prove to that side of the house.'"

CITY GOVERNMENT says: "The proposition to establish a municipal gas plant in Buffalo has been defeated in the council. While *City Government* takes neutral grounds in the discussion of the question of municipal ownership, yet in this particular instance it considers the action of the council wise, and justified by local conditions.

"We argue from different premises, but we reach the same conclusion as does the council. Our conviction is that no city now conducting a public plant in an unbusiness-like manner should undertake any other responsibility for fear of making a bad matter worse. At the present writing, Buffalo is the most wasteful city in the United States, if not in the world, in the use of water, having used in 1899 more than 250 gallons per capita per day. This does not mean that the city is cleaner than any other, but rather, less business-like. It means that a large amount of money is expended to perform a service which is absolutely useless."

MUNICIPAL OWNERSHIP A STEPPING STONE FOR OFFICE.

PUBLIC POLICY, says: "This country will in time learn that they must stand as a unit against every socialistic device to evade laws and fasten upon communities debts for internal improvements

which taxpayers must pay. Des Moines, Iowa, and Mayor MacVicar have become famous through an attempt to evade the law and saddle a municipal electric lighting plant upon the tax payers of that city. The proceedings of the League of American Municipalities are burdened with long descriptions of what Des Moines had or was going to do in the direction of municipal ownership. In these gatherings of congenial spirits, Mayor MacVicar has posed as a brilliant corporation fighter, and as such has received much applause. He is a veteran of two campaigns.

First, The water works.—Mayor MacVicar devoted great energy and cost the citizens of Des Moines much time and money in many ways trying to compel the water works company to sell to the city. Years spent in investigation, in the abuse of corporations and the manufacture of campaign material resulted in an agreement on price between the company and the council. The matter was then submitted to a vote of the people and voted down.

"Second. The electric lighting plant.—Mayor MacVicar, with the aid of interested parties who wanted to make money by selling an electric lighting plant to the city, took up the study of electrical central station construction, engineering and operation, and was soon able to give points to the ablest manufacturing, construction, engineering and central station operators in the country. He demonstrated to a certainty that, with 'a loyal council, a competent (or an interested) engineer' and a Napoleonic mayor, there is no need to learn from experience or to be bound by laws enacted to protect tax payers from being raided with experiments.

"The proudest achievement of Mayor MacVicar's public life was the making of a contract with Messrs. McCasky & Holcomb Company, adroitly drawn to evade the law. By the terms of this contract the city agreed to issue warrants, to levy a tax for the payment of the same, and pledged its future revenue for the payment of the warrants. It was claimed that these warrants were to be issued for only the amount that the city had heretofore been paying for lighting and were, therefore, in anticipation of expenses necessarily incurred, and came under the provision of law authorizing the anticipation of future revenues to meet contracts for current expenses, and should not be debarred on account of being in excess of the debt limit. The plant was to cost $105,000.

"Mr. J. H. Windsor, representing the tax payers, began a suit to cancel the contract as illegal, because unauthorized by vote of the people and creating a debt beyond the city's constitutional limit of indebtedness. The case was first tried before Judge Bishop, who sustained the contention of the tax payers and was brutally assaulted by Mayor MacVicar and others for doing it. The supreme court has now affirmed the decision of Judge Bishop in a long opinion, written by Judge Deemer."

OPINION OF THE COURT.

"The court does not think that a contractual obligation, such as made for the ordinary expense of a city (light, water, gas, etc.), exists

here ; the rule cannot apply to obligation incurred for erecting a plant to furnish those needs of the city.

"The court believes that the rule adhered to must be correct, for, otherwise, a city, by such contracts as the one in question, might absorb all its general revenues and leave nothing for expenses ; warrants would then be issued to cover these expenses, and which could be enforced against the city, thus thwarting the very purpose of the constitutional inhibition of debt."

This decision spoils a chapter in Prof. Bemis' latest book—the would-be secretary and statistician of the League of American Municipalities—in which he uses this contract to show municipal politicians how they can evade the law and obtain municipal plants.

Mayor MacVicar can now join the party of court repudiators. He may think the people are with him, but the tax payers are not. Who are the people ?

THE WESTERN ELECTRICIAN says of the Mayor of Des Moines: "Their position would be much stronger were their leaders men of experience and established reputation. Mayor MacVicar of Des Moines, who posed as the special champion of municipal ownership throughout the meeting, and who was chosen president of the organization, spoke with an air of authority upon this subject, in spite of the fact that there is no municipal plant in Des Moines, and that there is not likely to be one there for some time. Yet Mayor MacVicar will henceforth be quoted as an authority upon this subject by advocates of municipal ownership, although his address merely repeated the claims of those who were interested in securing the establishment of a city plant in his bailiwick. Under the circumstances, no business man would be guided in making an investment or determining the policy of any enterprise he was directing, by views of one so inexperienced.

"Public sentiment is frequently misrepresented by office holders, who labor under the impression that they form and direct public opinion, whereas they are merely the creatures of circumstances. Too much importance should not be attached, therefore, to the expressions of local politicians, whether they are clothed in official authority or merely aspire to place.

"It is admitted even by those who favor the new idea that many of its most earnest advocates are actuated entirely by selfish motives. They may be influenced by the desire for political advantage or financial gain. In any event the tax payer's interests are lost sight of, when such rapacious spoilsmen advocate municipal ownership. Honest men hesitate about joining in such a movement."

EDITORIAL COMMENTS REGARDING THE AUTHOR.

M. J. Francisco has been known for years as a pioneer in combating the municipal ownership of electric light and railway plants, and the facts and data accumulated in the study of his specialty, have been of great value to all interested in electric lighting.—*Electrical Review.*

He is considered an expert in the line of economic investigation.—*Rutland Daily Herald.*

He holds no brief for any theory of society or of government, but simply submits the whole question, in a cold-blooded way, to the test of bookkeeping and dollars and cents.—*New York Evening Post.*

He treats the question with especial reference to the experiences of electric lighting, by various towns in the United States.—*The Liberty Review*, London, England.

His figures will be found difficult to disprove, we think.—*Electrical World.*

He has exposed the fallacy of municipal ownership, and his writings have made him an acknowledged authority upon this subject.—*Montreal Star.*

He is recognized as an expert in municipal ownership, and his opinions are sought after.—*Daily News.*

His work is a masterly showing of the fallacy of municicipal ownership.—S. G. Parsons, Boston.

I consider it the ablest argument ever made against municipal ownership.—Marsden J. Perry, Providence.

He is author of the able and forcible book entitled, "Municipal Ownership vs. Private Corporations."—*Electricity* of New York.

He has made an elaborate investigation of municipal ownership.—Alling, before Connecticut Legislature.

In his book can be found many things, which the advocates of municipal control will find difficult to prove untrue.—*Modern Light and Heat.*

His speeches are more widely quoted, than those of any man on his side in America.—*Passaic Daily News.*

He has made an exhaustive study of municipal ownership.—*Post Express*, Rochester.

He has presented a number of able arguments against municipal ownership.—*Street Railway Journal.*

He presents a most formidable array of data, as well as many records of municipal plant failures.—*Electrical Engineer.*

He is the only man I know of, who has made a thorough study of this question, and has analyzed the results intelligently, basing his conclusions upon personal examinations.—Burdett, before Massachusetts Legislature.

He has not only succeeded in collecting a mass of valuable data, but in presenting it has handled his facts in such a forcible and direct manner, as to carry conviction with them.—*Electrical Industries.*

He is a noted electrician, and his able article commends itself to the readers of the *News.*—*Saginaw News.*

He has recently published a treatise on Municipal Ownership vs. Private Corporations, and has collected with great care the statistics of cities owning their own light plants.—*Times-Star*, Cincinnati.

He is an eminent engineer, and has taken great pains to investigate the facts.—*Times-Herald*, Chicago.

His figures are accepted in the electrical world as standard.—*Journal*, Atlanta, Ga.

His reviews of the questions of municipal ownership cannot be otherwise than interesting, to those who are investigating this question. —*News*, Savannah, Ga.

He has personally examined nearly all of the municipal plants in the United States, and is well qualified to write upon the subject.—*American Electrician.*

At the Cape May convention he read his first paper on municipal ownership, which attracted wide spread attention. He has contributed to many scientific journals, on this and kindred subjects. In 1893 he published a book on municipal ownership, which secured favorable mention from the press of this country and Europe.—*Electric Power.*,

M. J. Francisco, a man of wide experience in electrical affairs, spoke at considerable length in answer to the statements made by those in opposition to the proposed ordinance, giving the local company a ten-year contract. He spoke from the standpoint of a practical man. He took in succession each city plant which had been presented by the other side as an example of cheap light, and demonstrated conclusively that the figures given were a mass of inaccuracies, and absolutely valueless.—*Argus*, Albany, N. Y.

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